JOURNAL OF THE
AMERICAN INSTITUTE OF ARCHITECTS

Volume XI APRIL, 1923 No. 4

Arthur F. Mathews

Institute Gold Medallist in Painting, 1923

By RAY BOYNSTON

THE intense preoccupation with the single phase of art that is expressed in painting, and particularly in the easel picture, has made of most painters in modern times specialists who have little except a theoretic contact with any other medium of the visual arts. Consequently the arts of architecture, painting, sculpture, design, tend to become insulated from each other. This intense personal vision may exist within the limits of a framed picture, or in a detached piece of sculpture without having any proper place in architecture and without being able to give us a livable design for a piece of furniture or a rug. An artist who can plan the structure and detail of a building with style and completeness, design furniture and carve it with an exacting sense of craftsmanship and the fitness of ornament, brings a breadth of vision into the field of painting that makes for dignity and unity to a comprehensive scale. This is that genuine equipment of the artist which gives him the authority that we associate with the great figures of the renaissance,—men who were great builders as well as artists and consummate craftsmen besides. They were able to realize their vision in architecture, in painting, or in sculpture; in bronze, in gold, in wood, or in stone; in tapestry, in fresco, or in mosaic.

Arthur Mathews, who is to receive the gold medal of the American Institute of Architects in recognition of his achievements in painting, is one of the rare figures of our time who have brought to the service of art the training and outlook of the craftsman and the builder as well as the painter.

In his long career Mathews has been an architect, a lithographer, teacher and director at the Hopkins Art Institute, mural painter, artist and craftsman at all times, and continues actively as a mural painter at the present time. By virtue of the scope and distinction of his achievements and the ripeness of his experience, he is to be honored, not only among the painters of California and the Pacific coast, where he has lived and accomplished all of his work, but as an artist of national importance. The steadfastness with which he holds to his convictions and purposes in art and the vigor of his intellectual grasp of it are in themselves distinguished.

He comes of a family of architects, having a father and two brothers in that profession. His apprenticeship began as an architectural draughtsman in his father's office in Oakland, where he remained until he was twenty-one years old. After leaving there he worked for a period as a designer and lithographer with the firm of Britton & Rey. He had been painting since he was fifteen years old and in 1885 he went abroad to study and remained there for some time. He was at the Académie Julien for a year as a pupil of Boulanger, and while a student there received the grand gold medal, an honor that is only given to a student who holds first place in composition drawing and painting in the same concours. This medal had not been given for nine years previous to his receiving it.

His experience as a designer and lithographer was a valuable one. In that period of the history of San Francisco it was a smaller community, more isolated and more self contained; there were no specialists and consequently a high general efficiency was required. A designer for a firm of lithographers had to be able to turn out anything that was asked of his firm and this set a premium on adaptability and alertness.

While still at work as a draughtsman in his father's office, Mathews essayed some projects in architecture that gained him a certain amount of recognition. In 1879, in an effort to correct the sanitary and other defects of the public school buildings in New York City, the "Sanitary Engineer" instituted a competition for a design for a model school building. The problem

involved accommodations for 800 pupils on a lot 100x100 feet, surrounded on three sides by buildings, providing a courtyard, classrooms with the greatest possible amount of outside light and ventilation, a school auditorium, and separate entrances and classrooms for boys and girls. Nearly one hundred designs were submitted and the jury appointed to pass on them awarded the first prize of $250 to Arthur F. Mathews.

At about the same time public interest was reawakened in the unfinished Washington Monument. The shaft, raised to the height of one hundred and seventy-four feet, had stood unfinished for twenty-five years on account of lack of funds. The design had never been popular with architects and an effort was made at this time to have the whole project reconsidered and new designs submitted in competition, utilizing the completed portion of the shaft in a new structure of entirely different character. Although the Monument Commission was never prevailed upon to accept the suggestion, a number of architects voluntarily submitted projects which were published and commented on in the art journals.

Among others that were reproduced in the *American Architect* in 1879 was a design by Mathews. It was further commented on in an article by Henry Van Brunt in the *American Art Review*. Considering the manner in which he lays bare the pretentions and shortcomings of other designs reviewed in the same article, the attention he bestows on this one is highly complimentary; and considering the fact that it was the work of a boy of nineteen, submitted anonymously, it must have seemed even flattering to the author of the design.

The following is quoted from Van Brunt's review: "In strong contrast to all the other suggestions for the completion of the monument, an interesting project from California, published anonymously in a late number of the *American Architect,* and here reproduced by permission, affords abundant and satisfactory recognition of the scale of the structure, and makes adequate use of sculpture as a decorative accessory. It is a spirited and poetic composition, correctly set forth in the style of the modern French Renaissance, and might have been submitted in the latest architectural concours of the Ecole des Beaux Arts. It would seem that a style which has been so consistently and so consecutively developed from Roman types, which has been so refined by the study of a race of artists through successive centuries of civilization, and which in this progress has received such abundant accretions, such as a boundless wealth of phraseology, and has thus become so pliable to the expression of modern ideas,—that such a style might have resources peculiarly applicable to the interpretation of the theme which we have now in contemplation. The present essay draws upon these resources perhaps with a too liberal hand, but it presents on the whole a conception which might well be accepted as the expression of a nation advanced in the higher arts of life.

"The monument has its roots firmly planted in the ground by means of successive stages or stories with battering walls; it stands, as Browning says, "four-square," and finishes at the top with a sudden upward leap, presenting in general outline and in its multiplicity of detail strong points of affinity with some of the better Hindu pagodas. Indeed, in respect to detail it is enthusiastically overloaded, although this fault is largely condoned by the severity of its sky lines.

"The iconology of this design might be improved. This, however, is not an essential point. Evidently the design is but a study; it is the outline of an heroic poem, crowded with incidents, set forth with a degree of rhetorical elegance which is full of promise. It has the merit of being distinctly monumental and entirely appreciative of the colossal scale of its masses."

An interesting episode of Mathews' career was a period of about fourteen years, during which he had his studio in connection with a shop in which he personally supervised the design and execution of fine cabinet work and furniture. The shop employed sometimes forty or fifty skilled workmen at a time. The project was not only successful as a business venture, but was notably successful as an experiment in collaboration between artist and craftsman. During all this time Mathews carried on his painting and executed some of his most important commissions, for painting has always absorbed his principal efforts.

He has twelve panels in the State Capitol at Sacramento, six in the Oakland Library; and in San Francisco, three in the Lane Library, one in the Children's Hospital, one in the Mercantile Bank, one in the Mechanics' Institute which replaces an earlier decoration of his that was destroyed in the fire of 1906, and a large lunette that was placed at the entrance of the Court of the Four Seasons of the P.P.I.E. in 1915, and is now hanging in the Palace of Fine Arts.

In the Masonic Temple in San Francisco he has done the whole group of half a dozen lodge rooms, even detailing the original designs of some. Everything from top to bottom, including the carpets, was designed in the shop, along with the cabinet work and special carvings, under his supervision. Several of the rooms are richly ornamented with carved panels, pilasters and brackets. Many of the pieces he made himself and all were done under his direction. Here is where his craftsmanship comes to the aid of his sensibilities as an artist and a decorator.

In the development of complete interiors Mathews shows to advantage his clear understanding of the functions of mural decoration and in this he has shown a comprehensive technique. His professional under-

standing of architecture has no doubt imbued him with a respect for the significance of walls and the spaces of a room that others do not so readily attain. The manner in which he has treated the Commandery of the Masonic Temple is a good exposition of it.

Flaubert, in some one of his letters, speaks of the sheer ecstacy he experienced in contemplating the untroubled surface of a huge unbroken wall of masonry. Something akin to this can be experienced in contemplating the interior of this room. It is in a way distinguished for the things that have not been done. Four massive arches rise to support the dome, their rich cinnamon-colored surfaces undisturbed by a single ornament or decoration of any kind. The four pendentives hang like gold pennants stretched between them without any ornament except a circular medallion in the center of each. They soar upward to a dome that poises as lightly as a bubble on the tops of the arches, seeming barely to touch them. The dome is covered with tracery of silver and blue with a great sun of gold and vermillion in the center, surrounded by a band of vermillion containing the signs of the zodiac; further out from the center is a ring of circular medallions containing symbols of the order. The base of the dome is punctuated by a row of round arched windows, the tops of whose arches have been decorated on their lower surfaces with medallions.

The lower portion of the walls is paneled in dark wood; the remaining space up to the moulding from which the arches spring is treated with a red brown color about the value of the wood, relieved by a paneled tracery in blue. It produces a subdued pattern of about the same interval as the panels below, but preserves the feeling of a surface undisturbed that is extraordinarily satisfying. The spaces within two of the arches have been decorated with paintings which take the form of lunettes with supporting panels below. There is not a single gesture or grandiose flourish in the room. It has a very genuine nobility that is simple and austere in its richness.

The arts carry on in their fashion the search after reality, the burden shared by philosophy and religion. In apprehending this reality in some degree satisfaction comes to the soul of man. This reality is sometimes apprehended in the beautifully proportioned space that makes an entity of a room; in the perfectly organized forms of a piece of furniture or a carved figure; or in organizations of color that evoke the emotions of form realized. When a man can bring his vision to reality in any of these forms, we call him an artist; when he can command all three in the service of art it is fit that we should do him honor.

The Autobiography of an Idea

By LOUIS H. SULLIVAN

Chapter XI.

Chicago

Heard and seen by all stands the word *PERSONALITY,* in solitary and unique grandeur.

Heard and seen by all stands the word *Personality,* eminent, respectable, much admired.

Heard and seen by all in the crowd it calls together, and through which it deftly wanders like a shrewd hunch-back, the word *personality,* now a dwarf, grimaces salaciously.

And now it is a word on fire; a tiger in the jungle; a python hanging from the limb, very still.

How deep, how shallow is that which we call the soul.

How monstrous, how fluent, how vagrant and timorous, how alert are the living things we call words. They are the giants and the fairies, the hobgoblins and the sprites; the warrior and the priest, the lowly and the high; the watch-dog and the sheep; the tyrant and the slave,—of that wonder-world we call speech.

How like hammers they strike. How like aspens they quiver. How like a crystal pool, a rivulet therefrom, becomes a river moving sinuously between the hills, growing stronger, broader as its affluents pour in their tributary power;—and now looms the estuary, and the Ocean of Life.

Words are the most malignant, the most treacherous possession of mankind. They are saturated with the sorrows of all time. They hold in most unstable equilibrium the vast heritage of man's folly, his despair, his wrestling with the angel whose name is Fate; his vanity, his pride before a fall, his ever-resurrecting hope—arising as a winged spirit from the grave of disaster, to flit in the sunshine for a while, to return to the dust and arise again as his civilizations, so laboriously built up, have crumbled one by one. And yet all the beauty, all the joy, all the love that man has known, all his kindness, all his yearnings, all his dreams for better things; his passionate desire for peace and an anchorage within a universe that has filled him with fear and mystery and adoration; his daily round of toil, and commonplaces; his assumption of things as they are; his lofty and sublime contemplations, his gorgeous imageries; his valor, his dogged will, his patience in

long suffering, his ecstacies, his sacrifices small and great—even to the casting aside of his life for a thought, a compassion, an ambition,—all these are held bound up in words; hence words are dangerous when let loose. They may mean man's destruction, they may signify a way out of the dark. For *Light* is a word, *Courage* is a word, and *Vision* is another. Therefore, it is wise to handle words with caution. Their content is so complex and explosive; and in combinations they may work beautiful or dreadful things.

All these thoughts have flowed from the one word, Personality, with which we began.

At Louis' age upon reaching Chicago, personality meant little as a formal word. He recognized by sight and feeling, by observing action and appearances, many of the phases of the powers of man upon which a word is built for use.

For words in themselves he had come to form a passing aversion, since he had noted their tendency to eclipse the vibrant values of immediate reality. Therefore, he preferred to think and feel and contemplate without the use of words. Indeed, one of his favorite pastimes was deliberately to think and feel and contemplate without the use of words, to create thus a wordless universe, with himself, silent, at the center of it all. Thus came about a widening clarity; an increased sensitiveness to values; a separate isolation of the permanent and the ephemeral; and it seemed, also, as though within his small, self-created silence he listened to the strident noises of the world as coming from without. All this Louis did with buoyant jocularity, for fun, for "practice" as he called it. And yet now and then a word came to him of a sudden, in surprise, a sort of keyword that unlocked, that opened and revealed. Among such was the word *self-expression*, which gave him a rude shock of hilarity and wonder. He said: What!—which expressed quite well what he meant.

For the first week in the strange city, Louis was the prodigal returned; and the fatted calf was offered up in joy. The next week he spent in exploration. As everybody said: "Chicago had risen phoenix-like from its ashes." But many ashes remained; and the sense of ruin was still blended with ambition of recovery. Louis thought it all magnificent and wild. A crude extravaganza. An intoxicating rawness. A sense of big things to be done. For "Big" was the word. "Biggest" was preferred, and the "biggest in the world" was the braggart phrase on every tongue. Chicago had had the biggest conflagration "in the world." It was the biggest grain and lumber market "in the world." It slaughtered more hogs than "any city in the world." It was the greatest railroad center, the greatest this, and the greatest that. It shouted itself hoarse in *réclame*. The shouters could not well be classed with the proverbial liars of Ecclesiastes, because what they said was true; and had they said, in the din, we are the crudest, rawest, most savagely ambitious dreamers and would-be doers in the world, that also might be true. For with much gloating of self-flattery they bragged: "we are the most heavily mortgaged city in the world." Louis rather liked all this, for his eye was ever on the boundless prairie and the mighty lake. All this frothing at the mouth amused him at first, but soon he saw the primal power assuming self-expression amid nature's impelling urge. These men had vision. What they saw was real, they saw it as destiny.

The elevated wooden sidewalks in the business district, with steps at each street corner, seemed shabby and grotesque; but when Louis learned that this meant that the city had determined to raise itself three feet more out of the mud, his soul declared that this resolve meant high courage; that the idea was big; that there must be big men here. The shabby walks now became a symbol of stout hearts.

The pavements were vile, because hastily laid; they erupted here and there and everywhere in ooze. Most of the buildings, too, were paltry. When Louis came to understand the vast area of disaster, he saw clearly and with applause that this new half-built city was a hasty improvization made in dire need by men who did not falter. And again spread out in thought, the boundless prairie and the mighty lake, and what they meant for men of destiny, even as the city lay stretched out, unseemly as a Caliban.

In spite of the panic, there was stir; an energy that made him tingle to be in the game.

So he bethought him he would enter the office of some architect; for a few buildings showed talent in design, and a certain stability. Outstanding among these was the Portland Block, a four-story structure of pressed brick and sandstone at Washington and Dearborn Streets. So he inquired concerning the architect of this structure and was told the name was Jenney: Major Jenney; or in full, Major William Le Baron Jenney. There were still some buildings under way, or arranged for, on the momentum of pre-panic days, though the town was otherwise badly hurt. A great fire, and a panic in finance, certainly made load enough for any community to carry, but Chicago, hard hit, bore up bravely.

Louis learned incidentally that the Portland Block had in fact been designed by a clever draftsman named Cudell. This gave him a shock. For he had supposed that all architects made buildings out of their own heads, not out of the heads of others. His experience in the office of Furness & Hewitt, in Philadelphia, it seems, had given him an erroneous idea. Yet the new knowledge cheered him in this hope: that he might some day make buildings out of his head for architects who did not have any heads of their own for such purpose.

He had once supposed that the genius for creating ugliness was peculiarly a Yankee monopoly; but he

later found in New York and Philadelphia that almost all the buildings in these cities were of the same crassness of type; a singularly sordid, vulgar vernacular in architectural speech. So when he found the same thing almost universally in evidence in Chicago, he assumed that this illiteracy was general, and a jargon peculiar to the American people at large. The only difference he could see between the vernacular of the East and that of the West was that one was older and staler; and he cited Fifth Avenue, New York, as an instance. It is true that, scattered through the east were architects of book-attainment in fair number, and a few of marked personality and red blood—particularly one Henry Richardson, he of the strong arm and virile mind—sole giant of his day. In Chicago there were two or three who were bookish and timid, and there were some who were intelligently conscientious in the interest of their clients. Among the latter may be mentioned Major Jenney. The Major was a free-and-easy cultured gentleman, but not an architect except by courtesy of terms. His true profession was that of engineer. He had received his technical training, or education at the *Ecole Polytechnique* in France, and had served through the Civil War as Major of Engineers. He had been with Sherman on the march to the sea.

He spoke French with an accent so atrocious that it jarred Louis' teeth, while his English speech jerked about as though it had St. Vitus' dance. He was monstrously pop-eyed, with hanging mobile features, sensuous lips, and he disposed of matters easily in the manner of a war veteran who believed he knew what was what. Louis soon found out that the Major was not, really, in his heart, an engineer at all, but by nature, and in toto, a *bon vivant,* a gourmet. He lived at Riverside, a suburb, and Louis often smiled to see him carry home by their naked feet, with all plumage, a brace or two of choice wild ducks, or other game birds, or a rare and odorous cheese from abroad. And the Major knew his vintages, every one, and his sauces, every one; he also was a master of the chafing dish and the charcoal grille. All in all the Major was effusive; a hale fellow well met, an officer of the Loyal Legion, a welcome guest anywhere, but by preference a host. He was also an excellent raconteur, with a lively sense of humor and a certain piquancy of fancy that seemed Gallic. In his stories or his monologues, his unique vocal mannerisms or gyrations or gymnastics were a rich asset, as he squeaked or blew, or lost his voice, or ran in arpeggio from deep bass to harmonics, or took octaves, or fifths, or sevenths, or ninths in spasmodic splendor. His audience roared, for his stories were choice, and his voice, as one caught bits of it, was plastic, rich and sweet, and these bits, in sequence and collectively had a warming effect. The Major was really and truly funny. Louis thought him funny all the time, and noted with glee how akin were the Major's thoughts to the vertiginous gyrations of his speech. Thus we have a semblance of the Major's relations to the justly celebrated art of architecture.

The Major took Louis in immediately upon application, as he needed more help. And to the fact that Louis had been at "Tech" he attached the highest importance—as alumni of any school are apt to do: so much for temperamental personality.

There was work enough in the office to keep five men busy and a boy, provided they took intervals of rest, which they did. In the Major's absences, which were frequent and long, bedlam reigned. John Edelmann would mount a drawing table and make a howling stump speech on greenback currency, or single tax, while at the same time Louis, at the top of his voice, sang selections from the oratorios, beginning with his favorite, "Why Do the Nations so Furiously Rage Together"; and so all the force furiously raged together in joyous deviltry, and bang-bang-bang. For a moment Louis quieted the riot and sang, "Ye people rend your hearts, rend your hearts, but not your garments," whereupon there followed a clamor of affronts directed toward Elijah the Prophet. The office rat suddenly appears: "Cheese it, Cullies; the Boss!", which in high English signifies: Gentlemen, Major William Le Baron Jenney, our esteemed benefactor, approaches! Sudden silence, sudden industry, intense concentration. The Major enters and announces his pleasure in something less than three octaves. Thus the day's work comes out fairly even. For "when they work they work; and when they don't they just don't."

On the stool next to Louis sat patient Martin Roche, now, and for many years, of Holabird and Roche. There was a tall, fleshy, mild-voiced American-German who had taught school; and a rachitic, sharp-faced, droll, nasal Yankee, who drawled comic cynicisms and did the engineering. "The old man," he would say, "is some engineer. . . . Like the Almighty, he watches the 'sparrow's fall,' but when it comes to the *tons* he's a l-e-e-t-l-e shy now and then, and sometimes then and now. You fellows work for glory, but I just work for coin." And then he rasped in song: "And as I said be-f-o-o-o-r, don't fall in love with a groceryman what keeps a grocery store." And thus he cackled on, as he figured strains; this time, he said, on a basis of three sparrows, while Louis hummed: "And as I said before, don't fall in love with a groceryman what keeps a grocery store."

John was the foreman. By nature indolent, by vanity and practice very rapid. He laughed to scorn and scattered to dust those that were slow; and would illustrate, in roseate tales, how fast he had done this and that. It speedily became evident that John was a hero-worshipper, as John blandly worshipped John in the presence of all; and Louis casually remarked that John's unconsciousness of his own personality was

remarkable to the point of the fabulous and the legendary, whereup they became fast friends.

Louis had instantly noted in John a new personality; brawny, twenty-four, bearded, unkempt, careless, his voice rich, sonorous, modulant, his vocabulary an overflowing reservoir. A born orator—he must talk or perish. His inveterate formula was, "I myself"—did—was—said—am—think—know—to the sixteenth decimal and the nth power of egoism. It gradually dawned upon Louis that he had run across a THINKER, a profound thinker, a man of immense range of reading, a brain of extraordinary keenness, strong, vivid, that ranged in its operations from saturnine intelligence concerning men and their motives, to the highest transcendentalisms of German metaphysics. He was as familiar with the great philosophers as with the daily newspapers. As an immediate psychologist, never before or since has Louis met his equal in vitality, in verity, and in perspicacity of thought. He, John, knew all that all the psychologists had written, and much, of his own discernment, that they but recently have begun to unveil. Louis found in John a highly gifted talker, and John found in Louis a practised listener, so their bond of union may be summed up in the token "I myself."

One day John explained his theory of *suppressed functions;* and Louis, startled, saw in a flash that this meant the real clue to the mystery that lay behind the veil of appearances. Louis was peculiarly subject to shock from unexpected explosion of a single word; and when the word "function" was detonated by the word "suppressed," a new, an immense idea came suddenly into being and lit up his inner and his outer world as one. Thus, with John's aid, Louis saw the outer and the inner world more clearly, and the world of men began to assume a semblance of form, and of function. But, alas, what he had assumed to be a single vast veil of mystery that might perhaps lift of a sudden, like a cloud, this great veil proved in experience to be a series of gossamer hangings that must slowly rise up one by one, in a grand transformation scene, such as he had viewed when, as a small boy, he saw "The Forty Thieves," where all was transformed into reality by a child's imagination. Now would it be possible for him, through the reverse power of imagination, to cause the veils of the hidden world to rise and reveal. On this threshold, for a passing moment, he faltered. Then resurging courage came.

Louis soon noticed that while *he himself* had a clear program in life, John had none. That all this talk, while of deep import to him, was for John merely luxurious self-indulgence and a luscious hour and parade of vanity; that he, the elder, regarded the younger with patronage, much as a bright child, but a tyro in the active world; while Louis saw that John was merely drifting. In this regard each kept his thoughts to himself, while encouraging the other.

In Philadelphia, one hot summer's evening, Louis had gone to the Academy of Music to hear a Thomas Concert. During the course of the program he had become listless, when of a sudden came the first bars of a piece so fiery, that, startled, all alert, he listened in amazement to the end. What was this? It was new—brand new. The program now consulted, said: *Vorspiel,* Third Act, Lohengrin—Richard Wagner. Who was Richard Wagner? Why had he never heard of him? He must look him up; for one could see at a glance that this piece was a work of genius.

He mentioned this episode to John Edelmann, shortly after they had become acquainted; and John said: Why, at the North Side Turner Hall, Hans Balatka and his fine orchestra give a concert every Sunday afternoon, and Hans is introducing Wagner to Chicago; let's go. They went.

Louis heard the Pilgrims' Chorus—and raved. They went every Sunday afternoon until Spring. There followed in course, the *Vorspiel* to Lohengrin, to Die Meistersinger, to the Flying Dutchman, the Ride of the Walkyrie, the amazing fabric of the overture to Tristan und Isolde, the immense solemnity of Siegfried's Tod, the exquisite shimmering beauty of Waldweben.

Louis needed no interpreter. It was all plain to him. He saw it all. It was all as though addressed to himself alone. And as piece after piece was deployed, before his open mind, he saw arise a Mighty Personality—a great Free Spirit, a Poet, a Master Craftsman, striding in power through a vast domain that was his own, that imagination and will had bodied forth out of himself. Suffice it—as useless to say—Louis became an ardent Wagnerite. Here, indeed, had been lifted a great veil, revealing anew, refreshing as dawn, the enormous power of man to build as a mirage, the fabric of his dreams: and with his wand of toil to make them real. Thus Louis' heart was stirred, his courage was ten-folded in this raw city by the Great Lake in the West.

Yet John had the good sense to caution Louis to let the philosophers alone for a while; to let them lie in possession,—paraphrasing Siegfried's Dragon—as each had merely built an elaborate scaffolding, but no edifice within, and each was more concerned with the symmetry of his scaffold than with aught else, unless it be to scorn the flimsy scaffoldings of others. He said that Schopenhauer showed some intelligence, because he was a man of the world, while the others were more like spiders, weaving in the gloom of obscurantism, festoons of cobwebs in their dens, far from the light of the world of men and things. That Louis had better let the *ding an sich*—the ultimate thing—alone, and keep his eyes on the world as it is; that he would find plenty to interest him there, and that if he had the eyesight he would find a great romance there, also a great tragedy. That—quoting Carlyle,—he said, "The eye sees that which it brings the power to see;" which again shocked

Louis; for the thought rose up: Maybe the veil is not without, but covers my own eyes: as John went on, preaching of the world of men and their significance, for worth or ill, in the social order, and Louis again was shocked at the words "social order."

But their talks were not always so strenuous and disturbing; for John was mercurial—an inventor of self-moods,—a poseur, infatuated with the pessimistic attitudinizing he assumed at will, for the sake of the sensation of gazing into the mirror of his thoughts which reflected the image of one he deemed the greatest philosopher and psychic of all time, still unknown to the world. But John had many other moods, as many as he chose to summon, and on the whole, he was jolly, bombastic, much alive, and in public, loud of speech in an over-weening beggary to attract attention, and thereby feed his hungry vanity. But withal he was Louis' warm friend, and showed it by a devotion and self-sacrifice singular in one so absorbed in self worship. And be this said here and now: The passing years have isolated and revealed John Edelmann, as unique in personality among fine and brilliant minds. Be assured he will not turn in his grave, unless in bliss, should he hear it said that he was the benefactor and Louis the parasite and profiteer.

They were both fond of exercise, and frequented the gymnasium. John, though not so very tall, was huge in bulk and over-muscled. He excelled in feats of strength, while Louis was dexterous and nimble in lighter work. As spring approached, John talked more and more about the "Lotos Club," whose members had boat houses on the bank of the Calumet, near the bridge where the I. C. R. R. crosses. He spoke of a "Great Chief," one William B. Curtis by name, who had founded the Club, who had beaten Dr. Winship at heavy lifting; was a champion all-round athlete, and had chosen the club name because of a bed of Lotus not far down the sluggish stream. He had said briefly, he preferred the Greek word *Lotos* to the Latin *Lotus*.

So in the spring the two went to live in John's boat-house. There were three other houses, one occupied by said William B. Curtis, who, when asked, said his middle name was Bill,—and "Bill" he was called. Louis was simply wild with joy over this new life. He was now actually a member of a real athletic club. He had never been a member of any club. And these young men, all older than he, were heroes in his eyes, if not demi-gods: they showed such skill in performance, and were so amiable toward a youngster. The mighty "Bill" was 38, so he said. He was the man of brains who never bragged. He was too cynical to brag, and deadly literal in speech. As a mathematician he had revised Haswell. His brain was hard, his manner human. He knew his anatomy, and had devised special exercises to develop each separate muscle in his body. So when in the sunlight he walked the pier for a plunge, he was a sight for the Greeks, and Louis was enraptured at the play of light and shade. He had won a barrel full of medals and he said he kept them there.

By a strange paradox he detested display. He had no vanity. He had a quizzical sense of humor which he displayed when he said the club was no club, because there were no dues, no entrance fees, no by-laws. All that was needed in an applicant was a sound constitution and a paper shell. And yet he said he had named the Club the Lotos because of his love of flowers, and the nearby presence of the lotus field. His brain was remarkably well stocked with varied information of the so-called higher sort, but he seldom talked of such, except briefly in derision. He was the exact opposite of John, but with an equal egoism which he kept under cover, and which passed as modesty—although he cared not in the least. All this interested Louis, who was beginning to observe men as individuals, and to study personalities; to observe in particular the working of men's brains; for he had begun to notice, with keen and growing interest, that the thoughts of a man corresponded exactly to his real nature. So Louis discerned in Bill a highly trained mind, self-centered and selfish in its nature. Louis guessed that the man had a past; that at least there was something hidden. So he spoke to John, who said: "You are right. Bill is not in athletics for fun, but for his health. Medals interest him only as tokens of condition. When he was a young man he was attacked by consumption. The doctors gave him up. Bill took to open air exercise. With his scientific brain you can imagine how systematically he went about it. He effected a cure; but now he has only one lung—would you guess it?" Briefly to complete the story of this man, the most remarkable that has ever appeared in the field of amateur athletics,—he became editor of "Wilkes Spirit of the Times" and remained such for years. At the age of 63 he, with a companion, was making the ascent of Mt. Washington when a blizzard overtook them near the summit. The bodies were found a quarter of a mile apart.

The effect of Bill Curtis upon Louis was not merely that of a magnificent athlete and man of brains, but primarily, and most valuably that of exemplar in the use of the imagination and the will, doggedly to carry out a program. That a consumptive should have risen to become a great athlete, was enough for him. The living fact profoundly and permanently strengthened Louis' courage in carrying out his own program. Though Louis did not especially warm up to the man, because their natures were not sufficiently alike, he has never forgotten what he then owed to the force of example of a clear brain. So Louis added "Bill" to his growing collection of personalities.

* * *

In the carrying out of his own program Louis' thoughts turned definitely toward France; which meant, specifically, the *Ecole des Beaux Arts*. He

wished now to go to the fountain head of theory. Of practice he had enough for present purpose.

On July 10, 1874, he sailed from New York on the steamship Britannic, on her maiden trip eastward. Before she left her pier there were grand doings aboard —flowers, speeches, high society. For she was proclaimed "The Pride of the Seas." She displaced three thousand tons. She was headed for Liverpool.

Prior to leaving, Louis called again upon his friend Stratton in New York, and was given further pointers—first of all, to call at the American Legation.

Louis found the ocean trip disappointing and stupid, with exception of the ship's great vertical engines and deep stoke-hole, the various apparatus, and the working of the ship by officers and crew, which he studied carefully, as he had become much interested in engineering.

While Louis was leaning on the railing, watching, with vague emotion, his native land fade in the mist, and sink from sight, as though irrevocably lost, he felt a pang of nostalgia; the sea seemed so lonely—after brisk excitement. Near by at the rail were others also watching the land disappear. As it became dim, a grating voice spoke out: "Thank God we have seen the last of the damned Yankees." The words were said in savage bitterness and contempt. Another voice agreed. Louis turned to the left and saw two short swarthy men, black bearded, black eyed. For a moment Louis thought it would be nice to throw them both overboard. He looked at them, wide-eyed, with something of the sort in view, and they talked on in lower tones. Louis was puzzled by the speech. Why "damned Yankees"? he asked himself. Why this hatred, this anathema? The phrase sounded racial; it stuck in his mind like a burr. It was said with such conviction as to seem impersonal; as though included in something larger. Never had he heard such virulence addressed to his own people. He pondered long over this; were the "Yankees" a hated people? If so, who hated them?

Louis did not know a soul aboard. He was proud of the ship, proud to be on it, but he was lonesome, and no one paid the slightest heed as he prowled up and down, in and out. The weather was fair all the way. The waves seemed eternally to roll and roll,—without crests. A vast expanse of water, dark blue, almost black; the circular horizon always present and only fifteen miles away. Never had his world seemed so small in fact, yet so limitless and grim in suggestion. He seemed to be always at the top of the world, always in the self-same spot, always in the midst of deadening monotony; day after day not a sail in sight, not a sign of a storm. Day after day confined to a solitary ship moving on through a wilderness of water, the vessel rhythmically rolling and heaving in its course, night and day, night and day; would it never end? Laughter, aboard, had long since ceased. Where was the romance of the high seas? The end came in a total lapse of ten days. The waters turned blue and then green. The boat came to a stop off Queenstown. Enshrouded in heavy mist, Louis saw a coast line of mountains or high hills. This is all he ever saw of Ireland.

The way along St. George's Channel seemed glorious. The clear, deep waters, and the glimpses of coast line restored his spirits as he felt his normal condition of clarity return. Here at last was an old world, which, as a new world he was to discover. How high his hopes, how buoyant his thoughts, as they swung into the Mersey. England came near to him, and nearer, then slowly nearer, then in contact, as the ship came to dock. Then came all the bustle and the joyous greetings about him, as Louis pressed his foot on English soil. Ah, what fluttering emotion, the overflow of bubbling youth. At last, at last, he had arrived where for years he had dreamed to come, and the broad Atlantic now lay between him and his native land. Now was to come that Great Adventure, which, as a joyous youth *sans peur* he faced with elation, and a confidence known only to pure fools. He stayed but a day or two in Liverpool, for his immediate objective was London. He was at pains to make it a daylight ride, for he wished to give his eyes all the treat of novelty. And what he saw was a finished land—something that had ripened through the centuries. This finished land impressed him with a sense of the far-away. It did not seem to vibrate; and, subaudite, came to him a stream of ancient tales. He found quiet, unobtrusive charm in the countryside, he noted patches of crops arranged with a precision, an inch by inch economy of space, that gave him a feeling that the people of this Island must be crowded, as each small farm was pressed tight against its neighbors, and each crop pressed tight against the others. This tightness confirmed his impression of a finished land. It was a revelation to him, who had come from the middle west of America with its vast prairies sparsely settled. He noticed, too, the amazing solidity of the roadbed, and the smoothness with which the train flew on at high speed. He saw, too, that there were no grade crossings; that everything was immensely solid in contrast to the flimsiness with which he was familiar. And the country roads were wonderful, so sound, so smooth, as they wound their way; and the charming streams he crossed; the verdure, the lovely groves, the hamlets, the villages, the many church spires rising from masses of green, the rural air everywhere, charmed him with the softness, the velvet, the down of age and tradition. Surely it was a finished land, beautifully finished, sturdy, vigorous, solid, set, and he felt the power of this land, this tight-crowded land, and he thought as an inference it must be true that in such a crowded land its people must be tightly self-conscious and self-centered. But he did not as yet clearly discern the portrait of this Island crowded on all sides by the sea.

Arriving in London, he thought the roof of the

Charing Cross Station would fall down upon him. It was so solid, so oppressively heavy, he was glad to escape to the street. In London he spent two weeks, most of the time joyfully. The weather, it appears, was extra fine. In this strange world called London, he walked many miles every day and examined most carefully everything within reach, and he thrilled to the booming of "Big Ben," the like of which he had never heard. It seemed to be an old world sound, a remnant or an aftermath of the Age of Romance. The power of its stroke almost said to him: "I am that I am!" One evening in his wanderings he found himself in the Haymarket and saw there shoals of wretches. He was rudely shocked, in horror, in pity and dismay. When he finally escaped from the many fingers clutching at his sleeve, he thought: Is *this* also London—does Big Ben boom in pride for these?—and a veil slowly lifted by degrees. And in the shops where he went to make his small purchases, the rudeness, the brutal rawness of the clerks, or clarks, amazed him. At the Music Halls he was equally astonished at the brilliance of the demi-monde. London was too much for Louis. He lacked the worldly wisdom to grasp its immensity, the significance of its teeming, struggling population, the cold reserve in certain places. But he noted the manifold variety, the surging crowds, the dismal hardness of so many faces, and a certain ruthlessness; and everywhere, in the jammed highways, the selfish push of those who must live. So he confined himself to the pleasanter aspects, such as Hyde Park, Rotten Row, and the Thames embankment. He was curious at the vast Houses of Parliament, vertical everywhere; and St. Paul's, black with soot; and many structures in which he sensed, in their visages, the solemn weight of age. They did not appeal to him in their historic message so much as in the sense of that which is old. This massive oldness made a new sensation for him. So passed the days.

Louis left England with so many intermingling impressions thrust suddenly upon him, so many seeming contradictions and paradoxes, that time was needed for the turbid mixture to settle, to clarify, and to reveal a dominant idea.

Thus Louis reached the shores of France much puzzled as to England.

He had sailed from Dover to Dieppe.

In the course of the passage, all the transcendental curves, known and unknown to mathematics, were revealed to him by the packet, which distorted and twirled the very heavens, in its can-can with the sea.

As they moved into the little harbor of Dieppe, what was left of Louis gazed at the quaint city with acceptance and delight. How different from England. What a change in physiognomy. How cheerful the aspect—a delicate suggestion not so much of age as of mediaevalism; he had read about it in many books—a surviving fragrance of romance. But on the way through Normandy, Louis was equally startled, at the rigid spacing of trees, at the dinky chateaux, new-made, stuck here and there as though forming the heads of pins. All was clean, all was stiff. But the farms and the cattle were a revelation, especially the cattle—never had he seen such.

As the train passed through Rouen, twilight was under way, and the spire of the Cathedral seemed to float in the air as though there were no earth.

Arrived in Paris after night-fall, Louis saw the streets aglow. He boarded a *fiacre*, and shouted to the *Cocher:*

Hôtel Saint Honoré!

(To be continued)

Saving Kenmore for the Nation

It should be of interest to all architects, and especially to the readers of the JOURNAL, to learn that a concrete movement has been undertaken to preserve historic Kenmore, in Fredericksburg, Virginia, as a national asset. Next to Mt. Vernon, no other building now in existence relates so intimately to the private and personal or family life of George Washington. Kenmore was erected in 1752 by Colonel Fielding Lewis for his bride, Betty Washington, the sister of the nation's first President, and readers are referred to the issue of the JOURNAL for March, 1915, for a more detailed account of the active personal interest that Washington took in the design and construction of this splendid old colonial home.

In the early part of 1922 a group of residents of Fredericksburg, learning that Kenmore was about to be placed on the market and that the spacious grounds were in danger of being subdivided into small building lots, took counsel to see what could be done to save this historic asset to the nation. Out of this first effort grew the Kenmore Association, founded along the lines of the Mt. Vernon Society, and with similar objects in view. The Kenmore Association lost no time in obtaining an option to purchase the property at a price of $30,000, and then instituted a nation-wide campaign to raise, by contributions, this amount of money and enough more to provide for the proper maintenance of the property in perpetuity. The response was immediate and gratifying, evidencing the interest of people in all sections of the country in

KENMORE

this patriotic movement, and in a very short time sufficient funds were received to enable the Association to take over title to the property on a basis of deferred payments for the unpaid balance. At the present time about half of the purchase price has been contributed.

The purpose of this brief article is to bring to the attention of architects and others the fact that there is now an opportunity to "save" Kenmore, and that it can be done at a relatively small cost. The Planters National Bank of Fredericksburg is acting as Treasurer for the Kenmore Association and will gladly receive contributions to this cause, or they may be sent to the president of the Association, Mrs. Vivian Minor Fleming, of Fredericksburg, to whose patriotic and untiring efforts the inception of this work and its successful record of accomplishment to date are due. It is hoped that readers of the JOURNAL will join in this undertaking, and make it, as it should be, an achievement resulting from a patriotic interest widespread throughout the land.

A Scholarship Competition

In our advertising pages the Alabama Marble Company announces a Scholarship Competition in the use of marble.

As is well known to members of the Institute, the Alabama Marble Company has for a long time been in consultation with the Board of Directors of the Institute over the question of arrangement of this kind of a competition. It seems evident that the Alabama Marble Company is looking a long way ahead, and that it proposes to test out its theories of making it financially possible for at least one architect to give a year's time to the study of marble. So far as we know, this is the first effort of this kind that has been made in the United States, and the results will certainly be watched with the keenest interest.

Competition in Uruguay

The JOURNAL is asked to announce an International Competition for a public building to be the seat of the municipal government of Montevideo.

The prizes are announced as follows: First, 10,000 pesos; second, 5,000 pesos, and third, 3,000 pesos; but the jury has the right not to award any of these, if, in its judgment, the plans are not worthy.

A Uruguayan peso at the present rate of exchange is about 85 cents.

A complete program can be had on application to the Honorable Jacobo Varela, 1317 F Street, N. W., Washington, D. C.

The competition closes at Montevideo, Uruguay, on 8 August, 1923, and the usual conditions as to method of procedure will govern the jury.

Decoration for Lane Medical Library
Arthur F. Mathews

Decoration for Lane Medical Library
Arthur F. Mathews

THE SOIL—Oakland Library
ARTHUR F. MATHEWS

THE GRAIN—Oakland Library
ARTHUR F. MATHEWS

RESIGNATION—Oakland Library
ARTHUR F. MATHEWS

CONQUEST—Oakland Library
ARTHUR F. MATHEWS

THE ARTS—Oakland Library
ARTHUR F. MATHEWS

NATURE—Oakland Library
ARTHUR F. MATHEWS

PAINTING

ARTHUR F. MATHEWS

From Foreign Shores---Casting Off

By IRVING K. POND

Enchanted are not necessarily enchanting ports. Enchanted objects are themselves under a spell; enchanting objects cast the spell over the enchanted. I am not enchanted, not even deluded; I suffered disillusionment a long time ago. Yet, though I am under no spell, the medium through which I observe them casts a sort of enchantment over the ports I visit in my paper boat. My frail bark enters the bight and comes innocuously to rest in a haven of enchantment. Really, as you well know, there is no bark nor bight. They are but images conjured up in the imagination of the skipper of my frail craft, which is getting into involved currents and must be steered toward the shore. We just miss the Norwegian Maelstrom and land, hap'ly, first in a Swedish and then in a Danish port.

Swede and Dane

In a package of photographs I glimpse several subjects so characteristic that I offer them for reproduction. Simplicity of composition, strength and vigor of form, rationalistic employment of materials, these elements characterize these works of the hardy North. Good proportions and a pleasing relationship between solids and voids add their charm. I would have you note the treatment of the hardwood floors, various doors and arch-

HOUSE IN STOCKHOLM J. TENGBOM, *Architect*

HOUSE IN STOCKHOLM J. TENGBOM, *Architect*

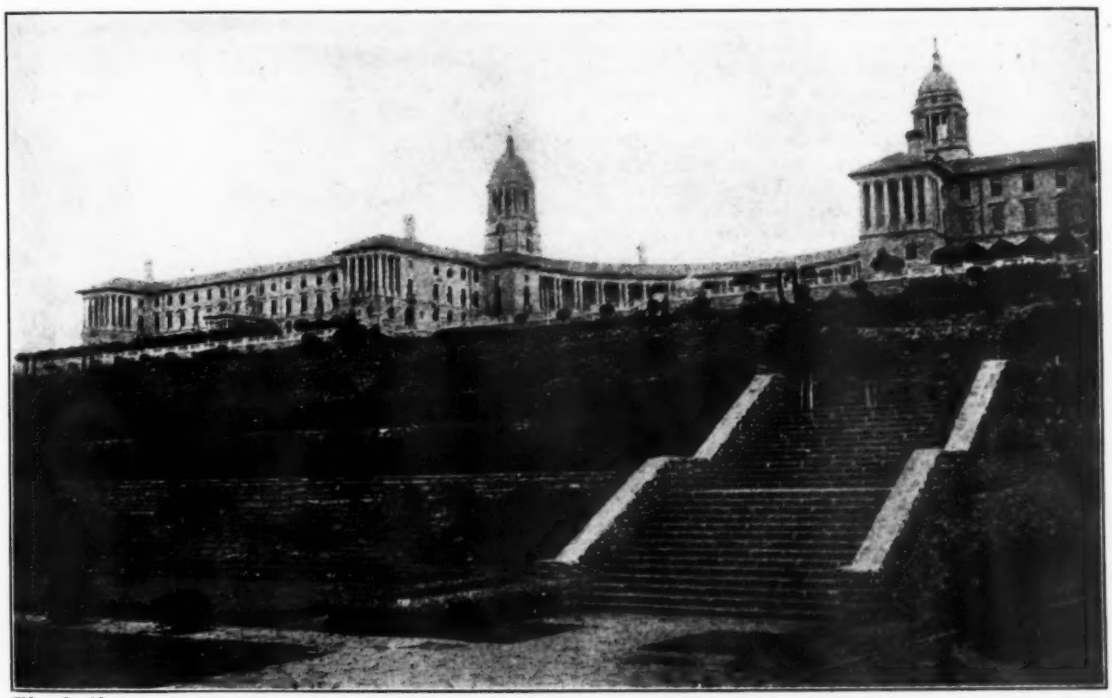
ways, and the roofs broken to give scale and to relieve monotony. These exhibits from Stockholm are frank revelations of individual and racial characteristics. *Architekten* (Dec. 30), of Copenhagen, gives several illustrations of the work of a seemingly real architect, H. B. Storck, who, born in 1839 and dying in 1922, reached in the fullness of his powers a ripe old age. A portrait gives us the counterfeit presentment of a man of serious mien, scholarly and dignified. The illustrations of his buildings show them to be characterized by qualities inhering in the man and in his race. Had space permitted I had gladly shown much of the work of this strong personality, and I regret that linguistic limitations on my part prevent my deeper penetration into his individuality.

To England

One advantage of voyaging on paper seas is that the channel holds no terrors; the crossing being quite imperceptible and only a few words long. And now we are in the midst of British sights and sounds and are feeling altogether at home. The British are so like the Americans in so many ways that I find it difficult to be as respectful to them as I feel I ought to be; for I never have been able to take my own countrymen any too seriously, although I believe that my attitude toward them is tempered to a degree with an appreciative understanding.

In putting on its new dress, or, perhaps better, in giving itself a new form, one of the avowed purposes of

The Architect UNION BUILDINGS—PRETORIA, SOUTH AFRICA. HERBERT BAKER, A.R.A., *Architect*



The Architect UNION BUILDINGS—PRETORIA, SOUTH AFRICA. HERBERT BAKER, A.R.A., *Architect*

HOUSE IN STOCKHOLM J. TENGBOM, *Architect*

Architecture, the Journal of the Society of Architects, London, was to make itself a more potent medium of communication between the profession and the laity; to give the laity a means of addressing the profession directly and at the same time of helping the laity to a more complete and sympathetic understanding of architecture; not of the practice, necessarily, but of the thing itself. The *Journal* in opening its pages has met with some response, a bit of which I shall comment upon later. But first, that the laity may have some definite mental concept of what they are expected to sympathize with, would it not be well for somebody, perhaps the architects themselves, to establish some broad, fundamental principles which may be generally and freely accepted as underlying the art? Mr. H. Bartel Cox, in a communication in the December issue, drawn out by my reference to a valuable article from his pen, mildly complains that I discourse "on architecture and on architects very much in the abstract." I admit, to an extent, the soft impeachment; but I have not confined my preachment to the abstract. I have very definite notions of what I conceive architecture should be and should mean to the individual and to the race; and I have set them forth concretely in my writings, as in my sketches and executed designs. This probably is news to several people —even among the architects! I am sorry to have misinterpreted Mr. Cox in stating that he advocated "Centralization, i. e., education by the government as in France." Of course, I know and I know that Mr. Cox knows, that individual members of the government such as, for example, M. Poincaré, M. Clemenceau, or M. Quelque Autre, do not teach in the French National School of Arts, but that the School is supported by the government and is under its patronage. I think that if one will read to the end—and the reading will repay one—Mr. Cox's "A Plea for the Modern Outlook" and, too, his communication, one will feel that I did him no particular injustice.

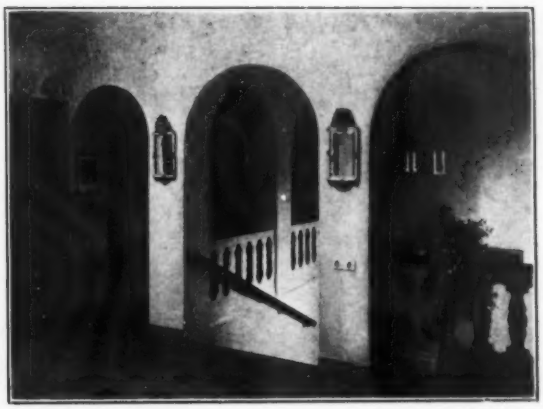
A Need for Standards

However, that architects and laity need some standards for judgment, if not some standardized principles, is made apparent by the two reviews signed by A. Trystan Edwards, one defending the use of the Orders in the design of the "County Hall," the other drubbing with some show of justice a portfolio of designs of detached buildings, called "A Modern City." In this Mr. Edwards makes it quite clear that no "City" is involved, but only a lot of detached toy houses, not one with a plan able to function. That phase is brought out; but I missed any philosophical discussion of the stuff as architecture. Perhaps the critic felt that none was demanded; yet there must be some canons by which such emanations may be judged as to their architectural merits or demerits.

Hilaire Belloc contributes an interesting, and in a way provocative, study entitled "The Return of a Norm" in this same issue. As the article was editorialized by C. H. W. in the February issue of this *Journal* (A. I. A.),

CENTRAL POST OFFICE, STOCKHOLM. F. BOBERG, *Architect*

HOUSE IN STOCKHOLM J. TENGBOM, *Architect*



HOUSE IN STOCKHOLM J. TENGBOM, *Architect*

I mention it only to introduce the few words I wish to offer on the appearance of certain distinguished members of the literary branch of the laity upon this new avenue of intercommunication between architecture and the world outside. In the January issue of *The Journal of the Society of Architects* our attention is called particularly to communications from two literary lights; and distinguished literary lights they are, as I have indicated. Although, if you did not already know this to be their reputation, you never would guess it from these present efforts. George Bernard Shaw—you've read his plays; and he always plays, though to that I do not seriously object—contributes a few frivolous lines, the tenor of which has for the moment escaped my memory. I remember quite clearly, however, the bearing of the epistle from Singenervin (visualized St. John Ervine), whose novels you have enjoyed. This gentleman, writing none too constructively in the present instance, says in effect: "There's ne'er an architect dwelling in all Denmark (nor in all the lands bordering upon the Seven Seas, for that matter) but he's an arrant knave"; and I answer with Horatio: "There needs no ghost, my lord, come from the grave to tell us this." All the strictures he passes upon architects have been leveled against them from time immemorial and are part of their stock of traditions. What Mr. Ervine is shying his shaft at is human weakness and not architecture. Think, for instance, of what architects or others might find to criticize in novels and plays: the foul atmosphere, the cramped mental state, the superficialities, and the like. The architecture of the theatre and of the dwelling cannot be much worse than the plays produced or the lives lived therein—that is, in some of them; and those, often, the most highly functional and beautiful. In your next epistle to the architects please, Mr. Ervine, give us some original message, something constructive, some revelation as original and as imaginative as that delivered some time since by your namesake in the Isle of Patmos.

An article on "The Architect's Training at the French National School" is readable and should carry some lesson. That there is so much of potential value in that training makes the more incomprehensible to many of us that, in spite of it, or because of it, France, throughout the period of its influence, has produced an architecture

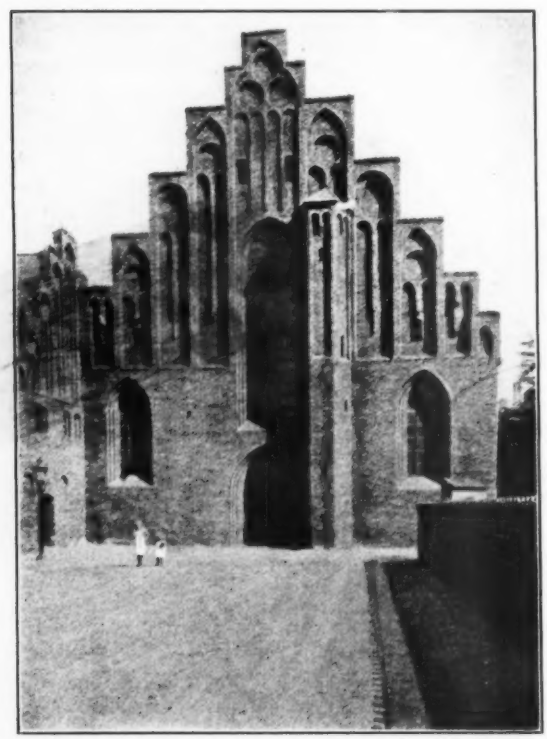
IMPROVEMENTS IN CENTRAL LONDON—SUGGESTED BY JOHN MURRAY, F.R.I.B.A. Looking from the Strand over the Thames

A House in Stockholm — J. Tengbom, *Architect*

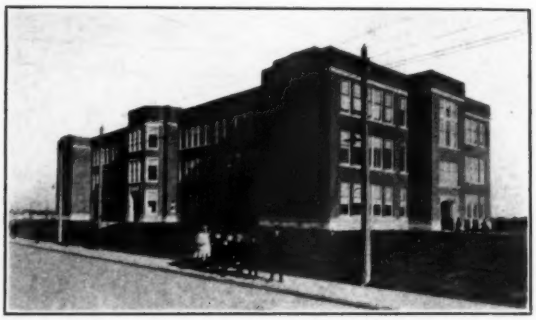
so entirely devoid of human sentiment and of emotional appeal, an architecture that is so lacking in the human quality. Artisanship, craftsmanship, draughtsmanship all are there; the thing which warms the heart is missing.

The Late Sir Ernest George

The London architectural journals, as well as the *Journal of the R. I. B. A.*, carry notes upon the death of Sir Ernest George, R.A. The opening words of the tribute of Mr. Paul Waterhouse, President *R. I. B. A.*, were these: "If ever the word 'gentleman' meant a man of perfect gentleness, that man was the late Sir Ernest George." I had the honor of being acquainted with Sir Ernest, and was at one time a guest in his London home. There I gazed upon his wonderful drawings, numberless it seemed. Not a few were framed and hung upon the walls; the bulk rested in cabinets and portfolios. Many are known to the public through reproductions. I have upon the wall of my draughting room one or more of these reproductions which hung there long years before I came to meet the artist personally. And when I did meet him I compared him immediately in my mind with our own Robert Swain Peabody, another such artist, another such "gentleman." After all, there must be some virtue in a profession which, if it did not produce, did develop and hold such fine spirits. Those of our band who have not been inspired, not only by the work, but by the names of Ernest George and Peto, Ernest George and Yates—and Peabody and Stearns—have been deprived of much of that which makes the profession of architecture a means of spiritual expansion to some of us.



Architekten — H. B. Storck, *Architect*
St. Maria—Helsingfors



Construction — W. Grayson Brown, *Architect*
Prince of Wales School, Hamilton, Ontario

On a Zig-Zag Course

The Architect (Dec. 22) gives illustrations of the Union Buildings (Government Buildings), Pretoria, South Africa, by Herbert Baker, A.R.A., Architect. I shall criticize neither the crescent nor the use of the Orders in this structure; indeed they seem to justify themselves and the architect in employing them. This building will be illustrated herewith if the plates lend themselves to reproduction. It is not because the subjects are less charmingly or suggestively presented by indefinite outlines that I wish the English plates were more clearly printed, but that *The Journal* could reproduce certain of them more satisfactorily for its readers.

As we have just touched at Pretoria, we can't be far from Cape Town. Anyway, we are near enough to make it quite visible to me, through the medium of the *Architect, Builder and Engineer,* of that burg, that they, the architects, down there have got the "bug" and are going to stir up feeling between themselves and the engineers by trying to put through (or over) an Archi-

tects' Registration Bill, which, as the engineers see it, will limit the legitimate practice of professional engineers. The subject is discussed in the engineering section of the paper. The engineers of South Africa seem not to be so keen on registration, and the discussion ends in these words: "The whole subject of professional registration bristles with difficulties, and it is a moot point—as witness the recent discussion in the United States—whether registration will accomplish all that is claimed for it and whether in a developing country it is to the public interest to be too rigid."

Construction, of Toronto (Dec. 22), gives space to the schools of the Dominion. In plan and elevation, especially in elevation, these buildings, generally worthy as they are, are too much like their ilk in the United States and too little like those of the mother country to intrigue me much. One of the best we reproduce.

Through the medium of the *Architect's Journal,* of London, we get a glimpse of Russian Soviet art, especially the art of the theatre, though as the originals of the illustrations are from Russia, we cannot be said to view the product through English eyes. Weird, patched up, pseudo-symbolic stuff a lot of this stage scenery is. They, in Soviet Russia, do not seem to want beauty—it is too ideal; nor do they want realism in the Soviet Theatre: they want, seemingly, to get as far away from realism or any illusion of reality as is possible—and, knowing or imagining what Soviet reality is like, we cannot find it in our hearts to blame them. Mark Twain's description of his wrecked raft as "like a box of matches struck by lightning" would aptly characterize the setting of the balcony scene in "Romeo and Juliet" as presented at the Kamerny Theatre in the year of Grace 1922. I know not why I said "Grace," for that suggests charm, and charm has been banished from Soviet art. I could not say "the year of our Lord," for the Lord has been banished from Soviet life. Perhaps I may as well have said nothing.

My ports of call must be enchanted, for no deeply vital image seems to impress itself upon my retina. For all that, I am getting rather to enjoy these voyages—so faint a puff in the paper sail produces such an illusion of motion.

Letters to the Editor

The Dome of St. Peter's

Sir: In the JOURNAL for December, 1922, there appeared an article by me on the subject of some notes I had made in my research on the dome of St. Peter's. Mr. Egerton Swartwout, in the January issue of the *American Architect* took occasion to express, rather facetiously, his disagreement with my statements. I opine that he needs some correction in his facts. The delay in my reply is accounted for by the fact that I am in Rome.

From various of his statements, one is forced to believe that Mr. Swartwout has never seen the model of the dome which is not on public view at this writing. It can only be seen by special permission from the Vatican authorities. Thus the average tourist does not say, as Mr. Swartwout jocularly remarks: "how interesting, and pass to the next exhibit."

There is no record that Michelangelo made models previous to the one mentioned in the following letter[1] which was written in Rome by Michelangelo on February 13th, 1557, to Leonardo di Buonarroto Simoni in Florence: " . . . that I begged His Lordship to grant me sufficient time to enable me to leave the fabric of *St. Peter's in such a condition that it could not be altered by the substitution of any other design for my own.* As I heard nothing more about the matter, I proceeded with the said work, but it has not yet reached the desired condition, and not only that, *but I am obliged now to construct a large wooden model of the dome and lantern so as to show the exact manner in which it is to be finished.* All Rome has asked me to do this, the Most Reverend Cardinal di Capri in special, and I estimate that it will keep me in Rome for another year at least. I entreat the Duke. . . ."

[1] Michelangelo—A Record of His Life, by Robert W. Carden, pp. 300.

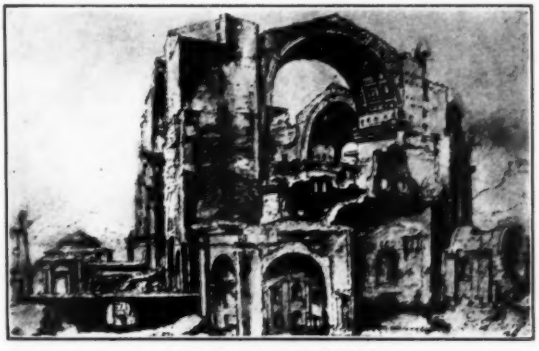


FIGURE 1 HEEMSKERCK—1532-1535

FIGURE 2 HEEMSKERCK—1532-1535

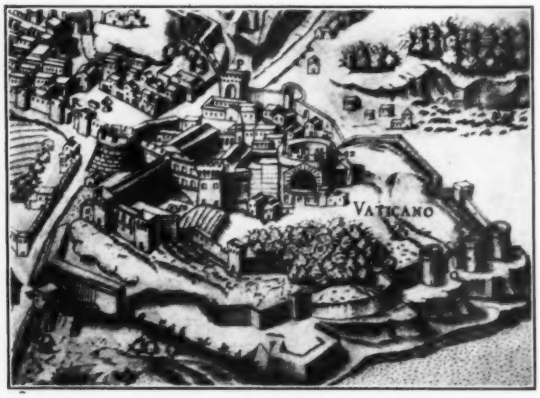


FIGURE 3 DATE AND ENGRAVER UNKNOWN

Mr. Swartwout says, "Michelangelo could and probably did model hundreds of little domes," which is no doubt true; but it appears certain that, up to the date of his letter, no models of his on anything like a large and intelligible scale had been provided for St. Peter's.

It is to be regretted that Mr. Swartwout, in his endeavor to prove his point, should so completely ignore what I said about the heightening of the dome. A person who had not read my article would infer from his criticism that I did not so much as mention this salient change. Now then, Michelangelo made the model in 1557, seven years before his death. This gave him ample time to study the model from every angle and to realize what it was not possible for him to see before, namely, that the lantern would be eclipsed by the curvature of the dome as one approached the main entrance to the church as Michelangelo intended the church to be, that is, a church built in the form of a Greek cross, and not the church with a long nave as finally built.

Giacomo Della Porta, who was responsible for the completion of the cupola after Michelangelo's death, was a pupil of the great master. It is almost incredible that, if Della Porta had departed in so vital a point from Michelangelo's design as to heighten the dome very considerably, no notice should have been taken of the fact. Let me quote Symonds[2] on this subject; he says: "Taking, then, Vasari's statement in conjunction with the silence of Fontana, Poleni and other early writers, and duly observing the care with which the proportions of the dome"—that is, the dome as a whole—"have been preserved, I think we may safely conclude that Michelangelo himself abandoned the third or semispherical vault, and that cupola, as it exists, ought to be ascribed entirely to his conception." Further, it is a recorded fact[3] that Pope Pius IV strictly forbade any departure from Michelangelo's designs, although after the death of Pope Pius IV, Pope Sistus V omitted the con-

[2] J. A. Symonds, PP., Life of Michelangelo.
[3] Charles H. Wilson, Life and Work of Michelangelo, p. 520.

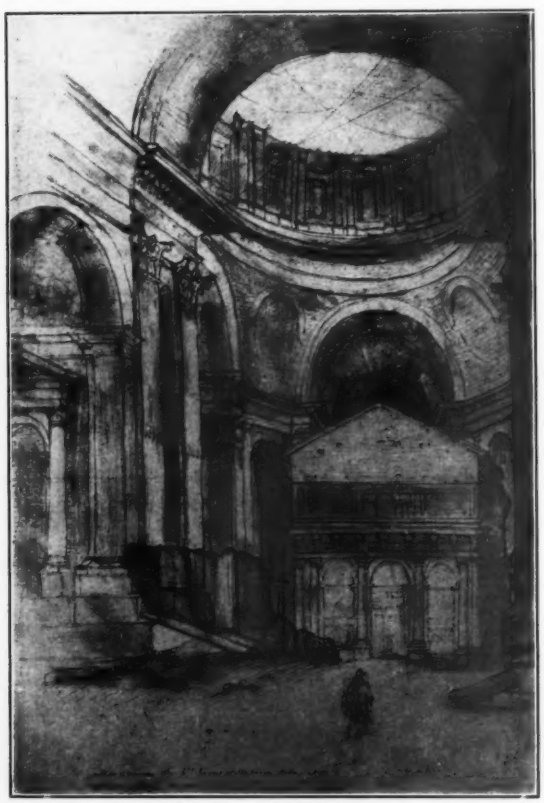


FIGURE 4 HEEMSKERCK—1532-1535

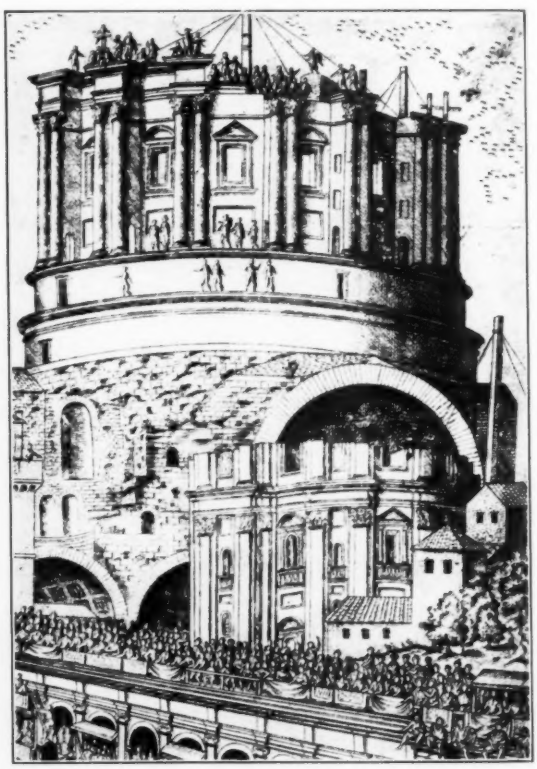


FIGURE 5 1563
Note the engraver's inaccuracy in the panels below the windows

FIGURE 6 GIAMBATTISTA—1575

Note the engraver's inaccuracy in the window heads as in comparison with Fig. 5, where they are accurately shown.

soles and statues, probably because of a lack of funds, and his desire to see the dome free from scaffolding during his pontificate.

With these points clearly in mind, let us answer Mr. Swartwout's reasons for the omission of the consoles. He says, "that projections from a form circular in plan tend to confusion, because they catch light in different ways." It is this variation and play of light and shade which gives to the dome its beauty and which expresses its solidity. There is a similar variation in the flutes of a column,—a variation which is pleasant to the eye and gives form to the column. If one admits that the buttresses are correct in the design of the whole and are necessary for stability, then the consoles which are a continuation of the buttresses are correct. The steel-like line of the silhouette of the dome is not complete without the consoles, and, moreover, the long sweep was to have been terminated by the statues. As it stands today, the hard angular termination is far from being pleasant. The added weight of the statues at the end of the consoles would have given an added security to the thrust of the ribs, while the crown of Apostles, or Saints, would have increased the splendor of the design. Furthermore, the omission of the consoles not only weakens the support given to the ribs, but also gives a stilled effect to the dome by abruptly separating the perpendicular lines of the drum and attic from the curve of the dome. It is difficult to believe that this would have received the designer's consent. Charles Wilson[4] writes as follows, "The beautiful curved buttresses bending back from the blocking course at the corinthian piers are altogether omitted. So serious a change as this is not likely to have been the work of Michelangelo, and it may be therefore supposed that he did not build the attic. The effect of the omission is very unfortunate." And another quotation on the same point from the same author says: "The entablature of the drum breaks into projections over the buttresses, and it is particularly to be noticed, that above each of these, starting from the summit of the blocking course, an abutment sweeps back or batters, with a beautiful curve, dying out in the cornice of the attic, just below the projecting ribs of the cupola. Not only is this admirable in design but it is equally so constructively and in harmony with sound principles."

[4] *Ibid*, p. 531.

Now let us spend a moment in observing the progress of the dome from the time Michelangelo became architect-in-chief until his death. First let us consider certain dates. Michelangelo became the architect in charge in 1547. The model was made in 1557. The work on the drum of the dome began in 1558, Michelangelo died in 1564. This list of dates will prepare the reader for some photographs taken from original engravings, now in the possession of Dr. Ashby, Director of the British School at Rome, which give an idea how the dome was progressing at different periods. The names of the engravers, where possible, and the date of the engraving, will be found under each illustration. Figures 1 and 2 show the condition of the supporting arches; figure 3 shows the columns of the buttresses being put in place; figure 4, that the work has reached the height of the entablature; figure 5, the entablature under construction; figure 6, that the work has reached the top of the entablature. This is the point where the work was stopped by the death of Michelangelo in 1564. Therefore, the reader will plainly see that there is no proof that the consoles and statues were intentionally omitted by Michelangelo.

Does Mr. Swartwout believe that Michelangelo would for a moment think of placing delicately carved statuary on a building before the latter was finished?

The work was discontinued for 20 years after the death

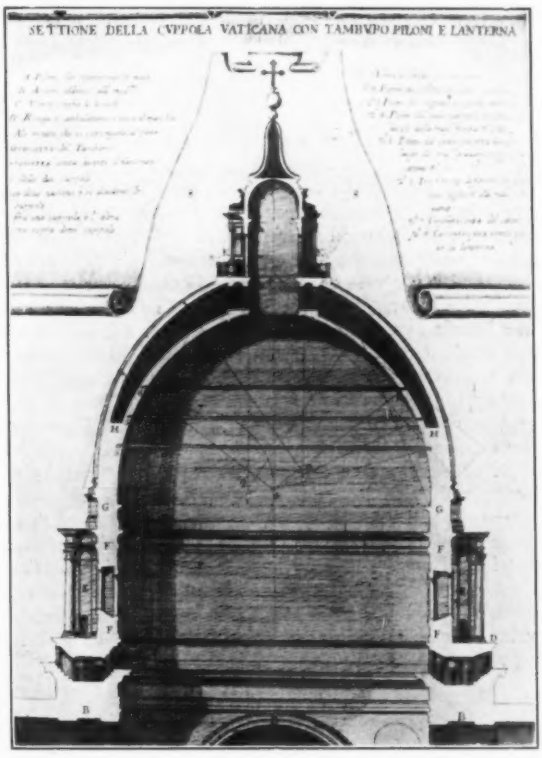


FIGURE 7

of Michelangelo. Although exposure to the weather for so long a period may be the cause of some of the cracks visible today in the buttresses and drum, yet most of the cracks in the dome are due first, to a hasty erection of the dome under Della Porta and Fontana; second, to the fact that the dome has been struck by lightning several times; and last, to earthquakes. The cupola proper above the drum was completed by Della Porta from July 15, 1588, to May 19th, 1590, six to eight hundred workmen being employed day and night upon the work. A solemn mass was celebrated in the church below as the last stone was being laid. The cross, which contains relics, was placed on top in November, 1593.

Gimmaldi tells us that the mosaic of the inner dome was begun in 1598 and completed in 1612.

Mr. Swartwout says, "just what the curve as it exists really is I don't know, and frankly I don't think anyone knows." I would like to have him know, and I have, therefore, had a plate from Fontana photographed (fig. 7). Durum[5] and Poleni[6] will also show him very interesting diagrams. There are original drawings by Michelangelo in the Museum Wicar at Lille of the dome of St. Peter's, and another in the Museum Teyler at Haarlem. Domenico Fontana published in 1590 the work he had undertaken for St. Peter's. Carlo Fontana republished (edition of 1614) the works of his relative. In this connection it is interesting to know that the lines of both the external and internal domes were cut into the pavement outside the walls by Della Porta and Domenico Fontana. Carlo Fontana compared these curves with the actual measurements of the domes, and he tells us that he found the curves to be correct. Unfortunately this pavement was destroyed in the 19th century, but unquestionably Carlo Fontana's publication gives us not only the curves in the pavement, but also the true profiles of both the real domes. The dome has been measured by others, as, for example, by Poleni. Particular attention is called to Carlo Fontana's book entitled Templum Vaticanum, Ipsius Origo, which contains many interesting engraved plates and data.

The breaks in the cornice of the buttresses, to which Mr. Swartwout refers, do exist in the model; I have measured them very carefully and have at hand all the dimensions.

He also refers to the windows on the curvature of the dome as changed from the model. This is not so: the ones on the curvature of the dome are a direct copy of the ones on the model. The windows on the model appear differently, it is true, because they are made of cardboard and are not in three demensions, but the exact details which the windows were to take in the actual dome are drawn on the cardboard and have the shadows cast and rendered.

From Mr. Swartwout's "regrets," one would judge that he believes that the paid critic has exclusive right to the press. Surely the investigator should likewise have his place—he should even be encouraged to present his researches, especially if he has spent many days of careful study upon the originals.

VICTOR L. S. HAFNER,
Fellow in Architecture, American Academy in Rome.

[5] Durum—Baukunst der Renaissance, p. 77-92.
[6] Giovanni Poleni—Cupola del Tempio Vaticano.

From Our Book Shelf

What's What in English Gothic

The architectural student of today is more fortunate than the student of thirty years ago, in that he has a wealth of good books at his command—books, too, that are inexpensive enough to be within the reach of almost anyone. Mr. Samuel Gardner has added one more to the list,[1] although the following excerpts from the preface denote that the volume is primarily intended for the layman. He says: "I myself have derived so much pleasure and benefit from this delightful study that I have always felt anxious to interest others in it to the extent of my ability. Many people have told me that they love Gothic architecture, but know nothing about it. They do not realize that, as Ruskin puts it, "Architecture is an art for all men to learn, because all are concerned with it; it is so simple that there is no excuse for not being acquainted with its primary rules, any more than for ignorance of grammar or spelling, which are both of them far more difficult sciences. Nevertheless, enlightened and patriotic Englishmen who have had a liberal education think it no shame to confess complete ignorance of our great national art. And thus it will be so long as the value of æsthetic culture is ignored at our public schools. It is a truism that the love of beauty comes next to the love of goodness, but the cult of beauty, whether in nature or art, is sadly neglected under our modern systems of education."

Mr. Gardner's book is well thought out, concise and carefully arranged, and we must thank him for his sympathetic judgment in the selection of plates, for he has mingled well-known and monumental examples of Gothic architecture with the more modest and less known. There is a small architectural dictionary, illustrated with very attractive pen and ink drawings by Mr. Arnold Mitchell, and nearly two hundred plates. It seems a pity that the plates are not the full size of the page, for many of them are too small to use in studying detail; but perhaps the author's endeavor to keep the cost down had something to do with this.

It seems to me that Mr. Gardner has succeeded in what he set out to accomplish, and that his book might well be added to the stack of those given to high school boys and girls, though it isn't worth while for the man who is practicing architecture.

BERTRAM G. GOODHUE.

[1] A Guide to English Gothic Architecture, by Samuel Gardner.

Community Planning and Housing

CLARENCE S. STEIN, *Associate Editor*

TYPE OF HOUSE AT GROSS-ROMINTEN, NEAR GOLDAP, EAST PRUSSIA — HANS I. PHILIPP, *Architect*

The Housing Situation in Germany

By HERMANN HECKER, *Architect,* Düsseldorf

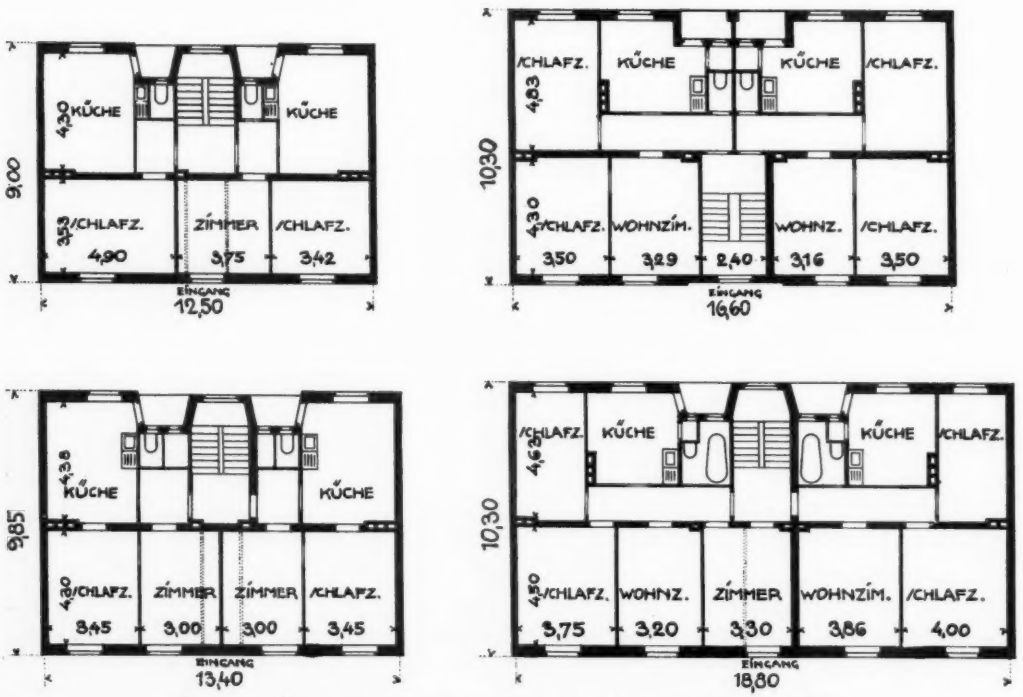
At the end of the war everybody in Germany hoped for a quick return to normal conditions in housing which meant that governmental control, a war measure, would soon come to an end. This has proved to be impossible. Under pressure of prevailing circumstances control has even had to be extended.

At present, no tenant can be given notice to leave, and rents are not regulated according to the law of supply and demand. Tenants have, so to speak, become holders of a perpetual lease. Even if a house owner urgently needs a rented dwelling for his own use, the tenant can not be forced to leave. Tenants are not permitted to trade their dwellings, but if they desire to move to another place a tenant may obtain an apartment by exchanges, through the agency of special dwelling boards, invested with important powers. Apartments can be obtained only through the agency of these boards and the conversion of dwellings into offices is permitted only if equivalent new dwellings are constructed and placed at the disposal of the municipal authorities. *The house owner's right to dispose of his property is thus expropriated* and a new concept of property and of property rights is gradually being formed.

At the end of the war, rents were the same as in 1914. Families of soldiers even paid lower rent, reduction having been compulsory in their cases. Firmly resolved to restore normal economic conditions, the Government decided, after the armistice, to maintain the pre-war level. Underlying this decision was the idea that the mortgaging of property would increase if rents rose, making future reduction impossible. It was decided that what happened after the Franco-Prussian war, when the rapid increase of rents unfavorably affected housing conditions and caused a general rise of the cost of living, should not occur again.

It seemed unfair that the house owner should be allowed to enjoy a special privilege, while those who subscribed to the war loans and bought Government bonds, or the poor servant girl, who placed her gold savings in the savings bank, had to be satisfied with paper marks. Therefore, the pre-war basis of rent was maintained, and paper instead of gold is considered as legal tender.

Prices for the main necessities, such as food, clothing, and lodging, during the war had been balanced to some degree through public regulation. Foodstuffs were rationed, clothing could be obtained only upon presentation of a certified order for delivery, rents were stabilized. But post-war conditions were such that economic



Apartment Houses Erected by the City of Düsseldorf from Its Own Plans

control by the Government could not be uniformly maintained. Only rents remained stationary, having been for a long time so low as to appear ridiculously out of proportion to the general cost of living. The cost of foodstuffs and of clothing has increased so rapidly that the standard of living has steadily deteriorated. A bright ray was always the cheap rent which remained stationary. It encouraged the belief that normal times would return.

The depreciation of the mark destroyed the well-being of that part of the population which possessed capital in income bearing forms. Moreover, rent restriction very much reduced the economic well-being of the landlord. Living on independent means derived from the revenue of capital or of real estate is unknown today. Everybody must work. And frightful is the misery of aged people who are unable to make a living. Dwellings, like foodstuffs and clothing, must ultimately be used up, even if at a much slower rate, and they must be constantly renovated. But the cost of renovation increases as the value of the money sinks.

Moreover, when the war came to an end, there was a shortage of dwellings, as the use of building materials had been strictly controlled by the Government and only war industries had been allowed to erect houses for their workers. But as the mark declined, the cost of construction increased. This caused a terrible disproportion between the low rents of the old houses and the high interest to be paid on building capital. Thus the economic regulation of the production of new houses had to be invoked; it became necessary, in other words, to make this form of production part and parcel of the general economic system.

In anticipation of post-war building activity certain changes, favorable from the social viewpoint, took place during the war. Breadwinners being absent, many dwellings were abandoned. Thus housing conditions automatically improved. Congested quarters became emptied; unsanitary dwellings were eliminated. After the armistice soldiers soon began to return, demobilized in a precipitate way. Numerous marriages having been contracted during the war, many new households were founded. Where settle? Building had been interrupted for four years. All who had a dwelling, however modest, clung to it, refusing to admit lodgers as this was of no advantage owing to the depreciation of the mark. Yet this was fortunate in some measure because it prevented overcrowding in many places, although as the people must be housed somewhere, dismal overcrowding resulted in other places.

To improve conditions the systematic rationing of dwellings was resorted to. Every person may now claim a dwelling place only as determined by law. Rooms exceeding the legal number are detached and placed at the disposal of the regulating authority, after an inspection of the existing apartments by commissions made up of representatives of all political parties. Many families, who in time of peace had built an agreeable house of their own, are now forced to receive undesirable tenants of whom they never can get rid. Many have sacrificed part of their fortune to build an extra dwelling in order to be spared, temporarily, at least, the inconvenience of

DÜSSELDORF—Interior Court of Type Shown Opposite GOERKE, *Architect*

rationing. However, the improvement of the dwelling standard of the lowest classes of the population, which has resulted from the unprofitableness of letting out rooms, causes a demand for more dwelling space than can be provided by the rationing of the few larger apartments. Thus the housing shortage becomes ever more acute, ever more oppressive, and is augmented by the return of Germans from the old territories and through foreign immigration.

The delivery of coal, in execution of the treaty stipulations, necessitates the presence of extraordinary numbers of miners in the mining districts. To provide dwellings for them a special tax on coal is being levied. Moreover, communities and cities in general began construction at once after the war, without intervention or regulatory acts by the terribly shaken German State. Construction was hastily organized and started in order to relieve unemployment among building laborers. Debts have thus been heaped upon debts to finance building. The central government and the states have finally printed money, have given subsidies, which which are "To yield interest in the future," in order to help overcome these difficulties. However this again engendered the difficult problem of interest and of amortization. For even if the cost of the new houses may determine the level of rent, the constantly growing poverty makes it impossible to keep rents on an economic level. This situation gave rise to the idea that rent restricting regulation should be applied for aiding the construction of new houses, rents of old houses

HOW THE SPECULATOR DID IT—Buchheim near Mülheim

One of a Group of Houses Erected by the City of Düsseldorf as an Experiment in the Use of New Materials. The Walls are of Hollow Cast Pumice Stone (volcanic) and the Ceilings are of Slabs of the Same Material

being gradually regulated to correspond to the depreciation of the mark. This everybody realizes. But the house owner—it is being asserted with somewhat grim humor—must not be given the "benefit" of this increment; in consideration of the national plight the house owner must become impoverished just as is the paper money capitalist. It has finally been seen that the entire increase of rent should be collected as a dwelling construction tax and be used for the erection of new houses. This principle has now been definitely formulated and has been embodied in the National Rent Legislation. The Dwelling Construction Tax for the time being, will amount to at least fifteen times the rent. Half of this goes to the State. Cities, however, are permitted to levy larger amounts.

This law, provisionally valid for a period of four years practically provides for the expropriation of privately owned houses at their pre-war value. House owners enjoy an indemnity calculated on the basis of pre-war rent and paid in depreciated paper money instead of in gold. The small landlord who before the war spent his savings of 6,000 gold marks, equal to 1,500 dollars, in building himself a little house, is now forced to accept a rental of 6,000 paper marks or of seventy cents at the present rate of exchange (January, 1923). At present the construction of the same house would cost 8,000,000 paper marks, or ninety-four dollars. The difference between 8,000,000 and 6,000 marks or 7,994,000 paper marks—or such greater difference as there may be, owing to continued decline of the mark —will gradually be levied on the property according to the National Rent Legislation. As long as the owner occupies the house himself, he puts up with it; as soon as he sells or lets it, he sees plainly to what a degree we all have become impoverished.

The landlord nowadays merely fulfills the function of a manager, who collects the building tax for the building fund, which is administered by the Government. It is true that these measures are carried out in an equitable manner, thanks to the honesty and justice of our civil servants, uncorrupted in spite of the difficult economic situation and their own plight.

Tenants, whose right of lease is guaranteed through the new law, however, are bound to share in the constantly rising cost of reparation and of renovation, as well as in the growing taxes and charges. These expenses now amount to a sum thirty-five times the pre-war rent and have to be met separately from the Dwelling Construction Tax which is now fifteen times the rent. In reality, most of the population are, however, unable to pay these items, on account of the constantly increasing cost of food and clothing. In this time of terrible dearth, when most families are unable to procure coal, and increasing dearth of food is threatening, rents have increased at least fiftyfold. The aged man, who through many years' economy has succeeded in clearing his house of encumbrances is now compelled to pay a building tax many times greater than his income from rent. Our economic situation becomes ever more puzzling!

Yet the financial trouble is not our only difficulty. We are reduced to living from hand to mouth, and day

Group of Houses in Dortmund. Alternate One-family and Multi-family Houses Erected for Miners. Here Stress is Laid on the Rational Application of Zoning, Avoiding Rigid Uniformity of Type

to day, and have to revert to primitive forms of political economy. Thus, capital and money are considered solely as means to an end, as working agencies. As the main factors in housing production we recognize:

Land, Labor and Materials

In order to build, land is needed. Before the war discussion of the housing problem revolved around the land question. The firm ground of a well organized money market and of a well protected ownership was at the basis of the discussion. However, post-war conditions have entailed the destruction of this basis. Today all German property has become liable to seizure. Hence, economics would be without foundation, had not the former sanctity of private property been superseded by an ever increasing subordination of the individual interest to that of the commonwealth. Land is in the first place public property. If interests conflict, the interest of the individual is subordinate to the public interest. This is the new concept of land rights that is becoming accepted.

In observing that the collapse of the mark has caused expropriation of private capital to the last cent saved by the small man, one does not find it singular that landed property likewise shares in the great economic calamity. Is it not a national duty to cede land that is needed for housing one's compatriots in a satisfactory way? For this reason laws for the expropriation of building land and of garden land have been enacted.

If land for housing purposes cannot be acquired by private agreements, expropriation is quickly effected. Construction may begin at once; the amount of the indemnity is fixed afterwards by a special adjudication. Just as the house owner must relinquish his property at its pre-war value and must accept paper marks instead of gold as full legal tender, so the land owner must accept expropriation on the same basis. I myself am building at present a group of houses on land that once formed part of the estate of a great landed proprietor, who has not been hurt seriously by expropriation, although the indemnity paid has been, in part, merely M 1.80 per square meter. The expropriation has, however, made it possible to erect a great number of modest family houses surrounded by spacious gardens. Already it is encouraging to observe how the inhabitants of this settlement, drawn from the ranks of the socially discontented, show signs of relief and of a new attitude towards life. Is not this a public gain?

Every due regard is shown for the needs of agriculture and of provisioning, and in these regards expropriation is subject to certain restrictions. But the pernicious effects of land speculation are finally eliminated. Compulsory expropriation of land for building purposes is necessary only in rare cases, for the fact that expro-

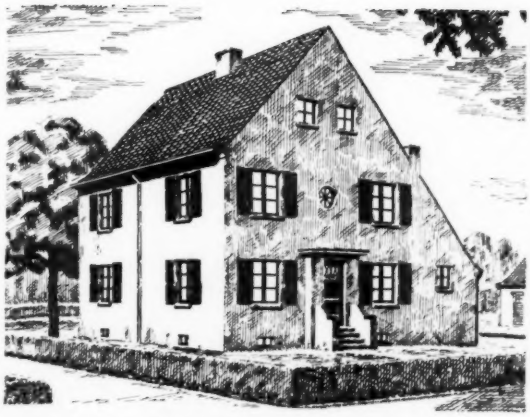
DORTMUND—Grouping of Medium Size Houses. D. AND K. SCHULTZKE, *Architects*

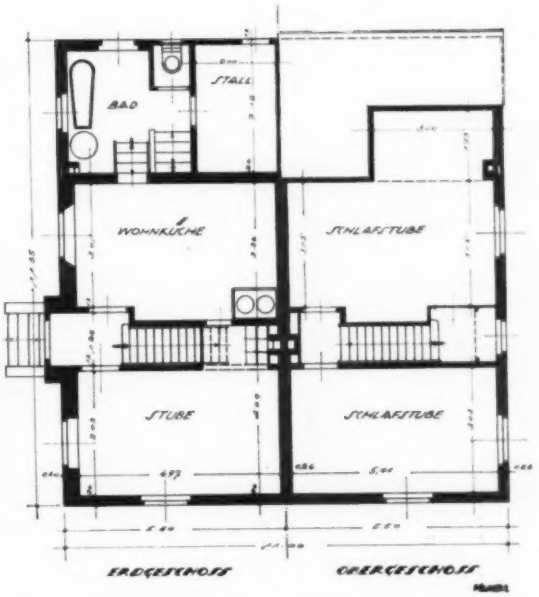
priation is possible has had a wholesome influence on private interest; land owners generally would rather sell voluntarily at a somewhat higher price than have their property taken at its pre-war value, paid in paper marks.

A particularly good idea is contained in the National Settlement Act. In districts with numerous great estates landed proprietors are, in consequence of this law, induced voluntarily to co-operate in developing settlements for their poorer compatriots. Land owners unite into "associations for land supply" and regulate the provision of land, alloting the burden of sacrifice among themselves. Unfortunately, however, the enormous cost of construction still forms an obstacle to the more extensive practical application of this excellent idea.

Two marks in paper money per square meter of land, and 550 marks per square meter for tarred roofing paper! Is not this enigmatic? No, certainly not. Land is not produced, and increment values produced through pre-war improvements have been amortized in past economic periods. Roofing paper, on the other hand, is a quickly wasted by-product of the coal industry. It reflects the coal prices; it reflects the rising cost of living and of labor. And this also is the weak side of the development of land values. Certainly, land is cheap, but only so long as its value is not being increased through post-war improvements. If streets and sewers have to be constructed, and gas pipes and water conduits must be laid down at the present cost of labor and material, then the cost of land will, of course, increase rapidly. Consequently the construction of new streets must be limited as much as possible. If construction is undertaken it must be carried out in the most rational and least expensive manner in recognition of the circumstances. For the time being we must utilize existing streets to the limit of their possibilities. This implies that city planning and housing are carried out on a new basis, making it necessary for the architect to solve new problems in a productive way.

Thus, the land problem is not the most difficult. More difficult is the problem of procuring building materials. (In approaching this problem, it may seem natural to make the unsophisticated reflection that "building materials, at any rate, exist in abundance.") A great land owner, possessing a forest close by an industrial village, received in the first days of the revolution a letter sent by some communists who notified him that the forest had been expropriated "by virtue of the laws of the Revolution." They sent laborers to the forest to cut timber. But the workers had to be paid, and when the damage had already been done it was discovered that the timber cut "by virtue of the laws of the Revolution" was more expensive than timber already in the market! Evidently wages form, so to speak, an essential part of building materials. But wages are regulated according to the decline of the mark. Moreover, as great quantities of the building materials produced in Ger-





Two-family house erected by the Freiheit Building Association, Düsseldorf. The houses are built by an association of building trades workers and are completed by the occupant in his spare time.

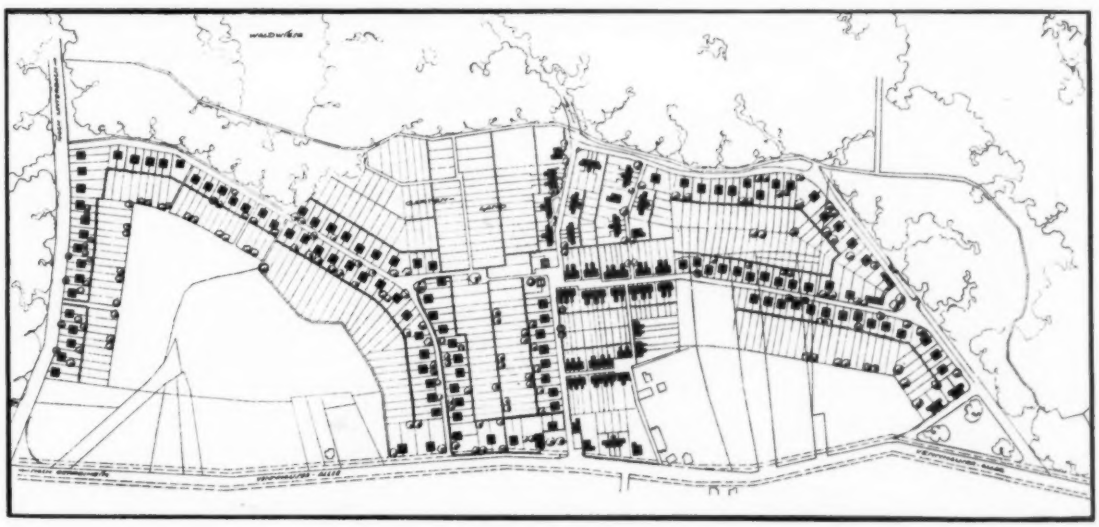
HECKER, *Architect*

many are bought with foreign money, their price is unfortunately subject to great fluctuations.

Every possible measure has been taken to prevent the rise of the cost of materials. Above all, great technical efforts have been made. Many new building materials have been invented especially with a view to the saving of coal. Attempts have been made to supervise and to regulate trading in building materials. For this purpose special organizations, "societies for promoting housing," have been created. The export of materials is sharply controlled.

However, it becomes evident that everything is bound up with the three main raw materials, *iron, wood and coal.* Coal, in particular, is of decisive importance. The nation controls the coal production. In connection with this, control of production and of use of building materials have also been established. Distribution of coal to producers of building materials is dependent upon the maintenance of a fixed tariff. In the end, however, this also is futile owing to the economic situation.

Wages regulate prices: During the war public control was, in great measure, extended to the whole field of employment. The soldier gave his work and his life for thirty-five pfennigs a day. The population was under the duty of rendering "emergency service." If demobilization had been carried out gradually, this compulsory military service might have been advantageously utilized for a reconstruction of the devastated regions. Instead,



FREIHEIT—Town Plan

SOME HOUSING DEVELOPMENTS IN BERLIN

R. SALVISBERG, *Architect*

DORTMUND—House, the Walls of Clay, Erected by the City of Dortmund as an Experiment in Reducing the Use of Coal in Producing Building Materials

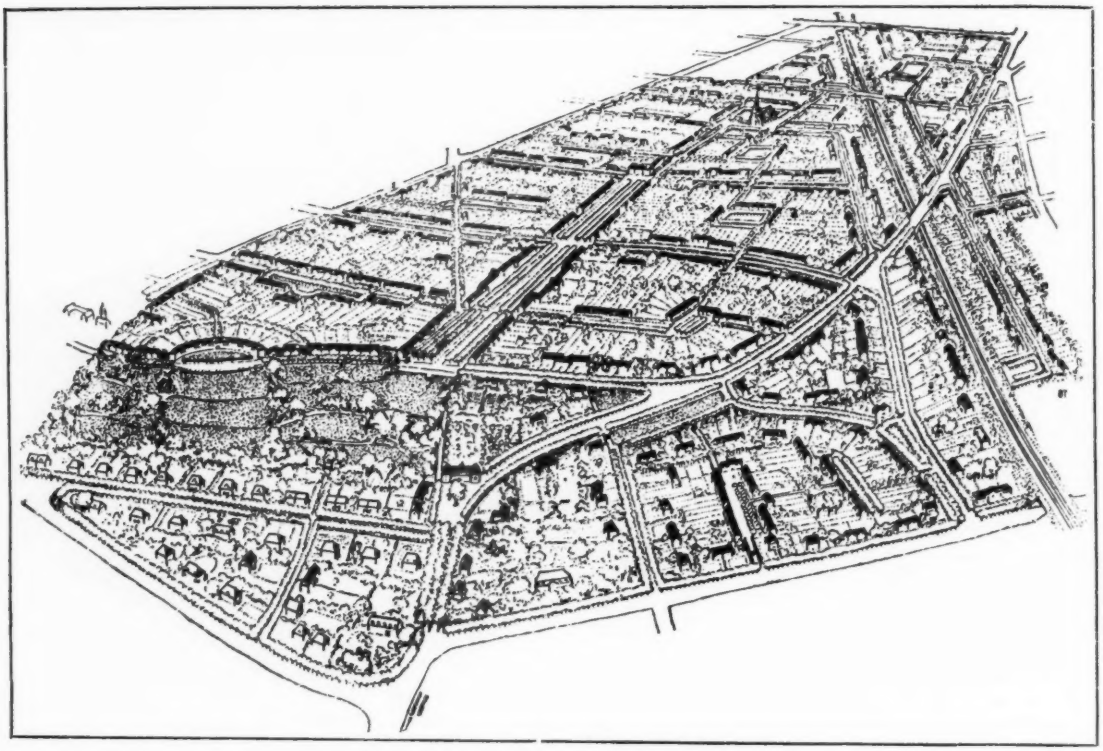
this useful organization, capable of being directed to a new and beneficial purpose, was quickly destroyed. Compulsory service has been abolished. Workers must be hired in the labor market. The attempt to realize a social ideal, the eight-hour day, as decreed by the peace treaty, weakens our productive capacity. In the field of housing the situation is somewhat relieved through voluntary organizations. Energetic men have formed building associations, carrying on building of their own houses in their spare time. Such organizations already have achieved a quite notable success, in spite of the theory of the eight-hour day.

Where will it lead? We architects daily ask ourselves this question. We deplore this waste of energy, which, in the last analysis, has its root in the fact that the economic war continues to rage in the economic field. We observe, in particular, the misery of the laborer, who, in spite of seemingly exorbitant wages, is unable to sustain a family even very modestly. We observe the distress of the building contractors, who, in spite of apparently enormous "usurious profits," do not know how to procure working capital, while the mark continues to decline. We are aware of the special difficulties attendant upon processes of production that give a slow return, and overlook also that the situation of the *peasants,* who already at the moment of writing (January, 1923) must charge 300 marks for a liter of milk, as against eighteen pfennings formerly, is not so favorable as the starved population generally assumes. The seemingly usurious profit does not suffice for procuring the raw materials and wages necessary to production.[1] All become constantly richer in paper marks; in reality, however, all become constantly poorer. We architects, who are less intent on making money than on doing useful work, suffer the distressing experience under which, in spite of growing building costs and compensations, the depreciation of the mark consumes more than the best effort, even of the busiest among us, can earn. We acknowledge it,—our employees are paid starvation wages. And yet we are unable effectually to raise them because our fees come in according to the depreciations of the mark. All who work on a mark basis can live only from hand to mouth.

We architects know that our own professional work, like the activity of the nation as a whole, can recover only if economic conditions are stabilized. We know that the building activity of the last few years was only the bustle of the desperate. Men who possess capital spend their fortune on enormously expensive renovations of their houses, for next year their means will not suffice to cover the cost. On the whole, why save? Rather realize, create actual values, be it ever so costly! Thus economic life becomes feverishly active. Only not save! Invest! Buy! Make improvements! The last economic reserves of the nation are mobilized and stir production. New manufactories rise—and all this, in last analysis, resulting merely in making Germany poorer.

For the intellectual workers, particularly for architects, the road is indicated. The lowering of our living standard in the present misery—only few of us can afford to buy a new suit of clothes—must not debase us into the loss of our self-respect. On the contrary, it should arouse us to greater efforts in the public interest. To Germany of today many things seem unpleasant, if we only observe the visible surface. But below the surface significant inner developments are taking place which once—perhaps

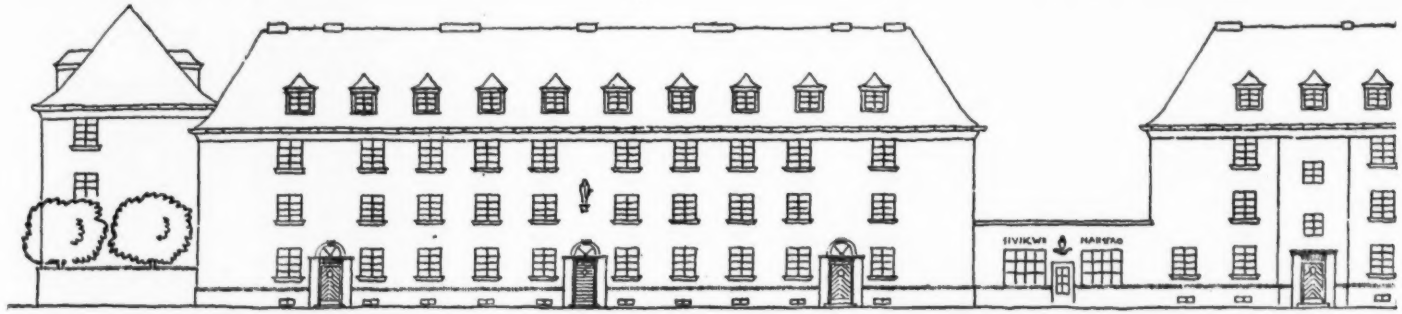
[1] Although building in Germany seemed very active at the time of our visit last July, it has now practically come to a standstill, because of lack of raw materials and the unstable mark.—C. S. S.



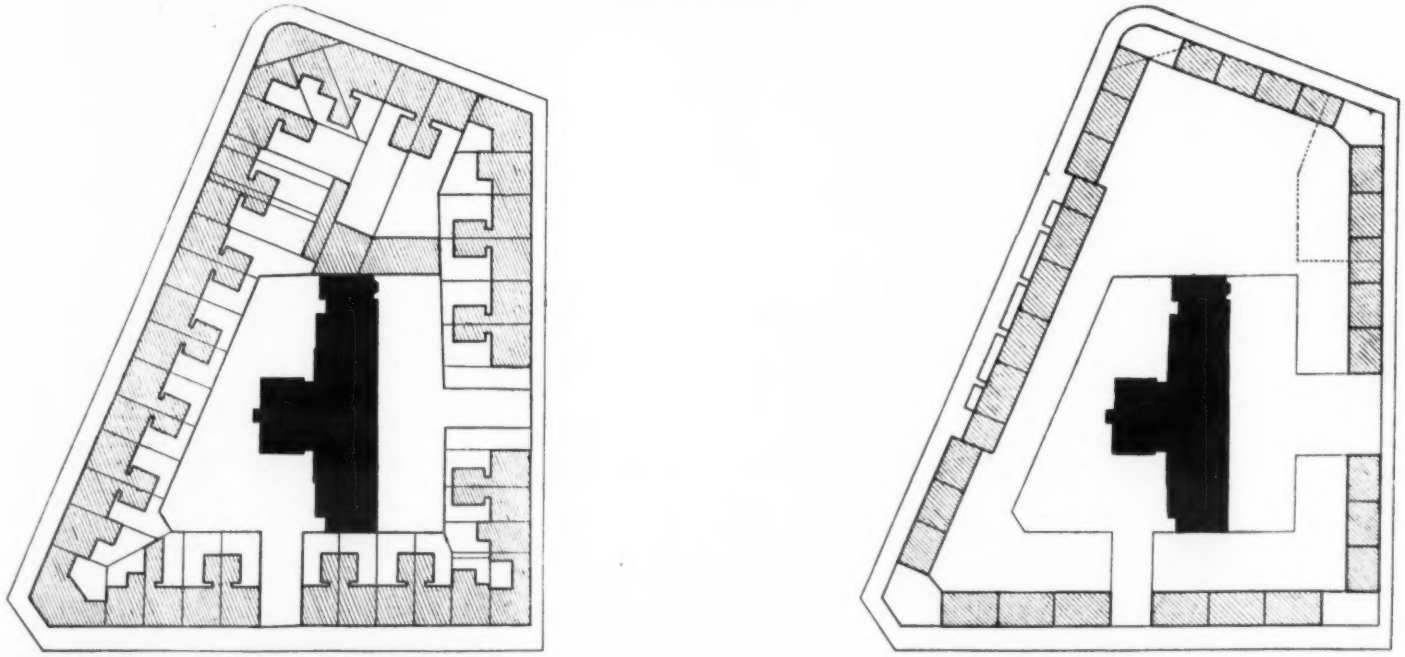
Town Plan for Falkenberg—Near Berlin

House at Kianten Near Goldap—East Prussia

Hans J. Philipp, *Architect*

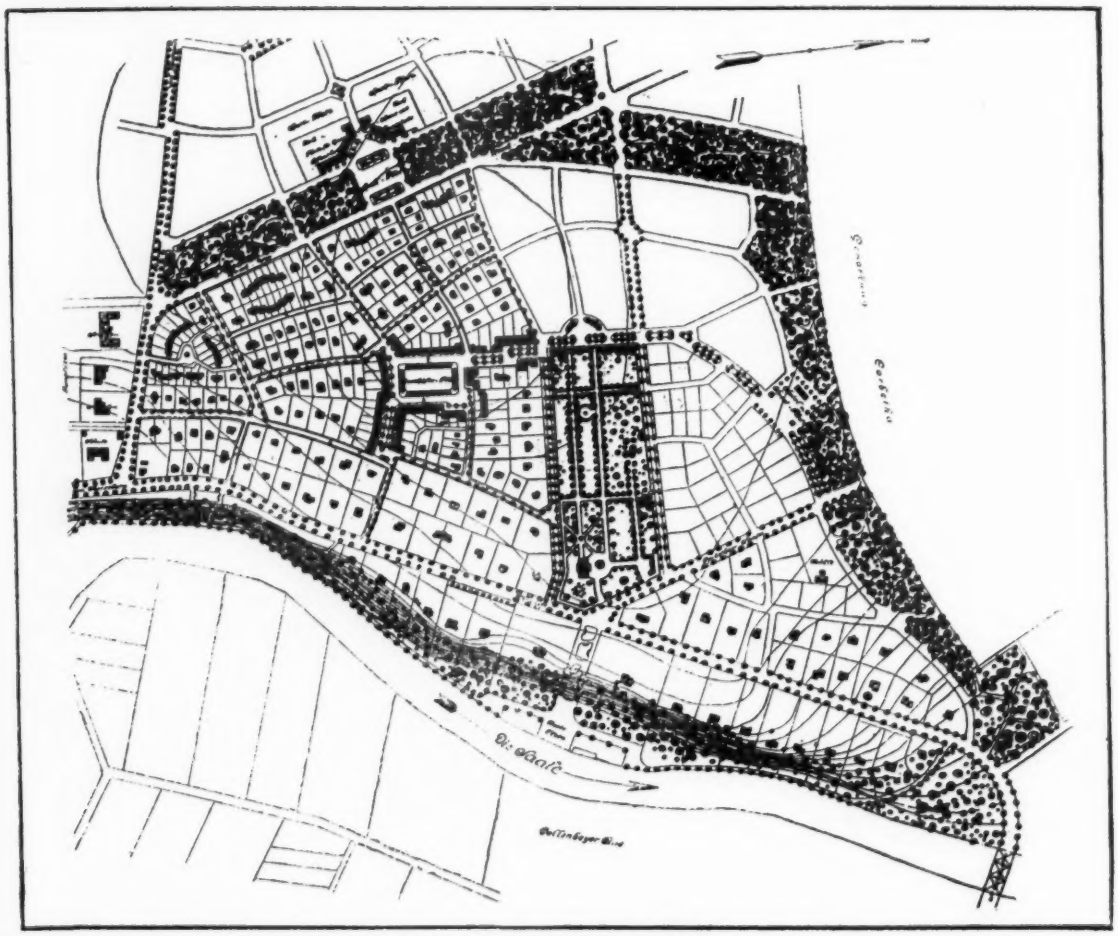


DETAIL OF ELEVATION



BLOCK DEVELOPMENT AROUND A SCHOOL IN DÜSSELDORF — FREESE, *Architect*

Due to the decreased price of land, as explained in the article, even in the interiors of the large cities, much greater spaciousness is now resulting. The illustration at the left shows the development possible under the building laws, and as it probably would have been built by speculators. At the right is shown how the municipality did it. Note the omission of buildings on the corner lots, which are left for planting.



SCOPAU—Town Plan for a Garden City

after still harder times—will make our people sound and strong. Social and class distinctions lose their former hold. Intellectual and manual workers get into close contact. Students work during vacation in the mines in order to earn the means for their studies. Many former officers have entered business, which thus has gained great organizing talent. In political life the leader is more and more taking the place of the mountebank. The biological fact that "blue blood" is neither better nor worse than bourgeois blood is being recognized. Princes become useful, capable members of the working nation! The new constitution, the republican form of government, is accepted even in conservative circles. Thus the present misery has its beneficial effects, especially in the field of housing.

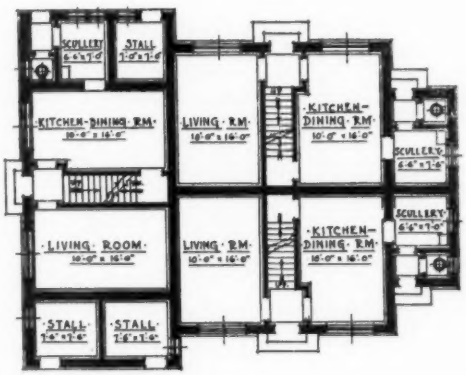
The high building costs enforce simplicity and economy. Progress is being made in organization and legislation. Planning is being carried out in a much bigger way than in the days of speculation. Legislation is being framed to promote the quick attainment of technical aims.

In this social organization the work of the architect is a greater factor than formerly. The relation between architect and contractor has become clearer. In building the greatest economy is regularly observed, producing artistic results characterized by simplicity under the forced avoidance of superfluous ornament. Land speculation and its effects having been eliminated, the pleasant and salutary grouping of buildings is facilitated. Small, modestly planned houses, with the greatest possible garden space, are now erected instead of tenement barracks.

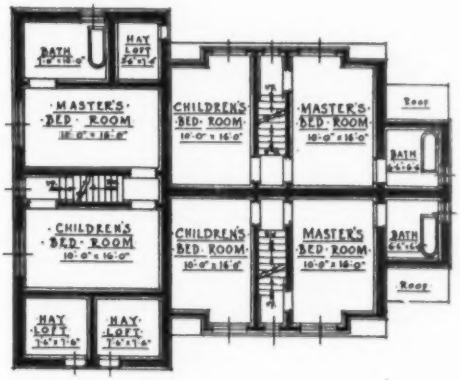
In interior planning great progress is to be observed. Parlors disappear. They would be rationed, forsooth, by the Housing Board for the benefit of lodgers. The formal parlor is thus replaced by the useful living room. The housewife, who cannot keep servants as formerly, appreciates practical arrangements more than before. A more solid concept of interior convenience is also to be noticed in the dwellings of workmen, who prefer to buy furniture for the best good of the household rather than to save quickly depreciating money. A house is no more considered as merely an investment, but as one of those social values for which nations exist.

· NORTH · ELEVATION ·

· EAST · ELEVATION ·

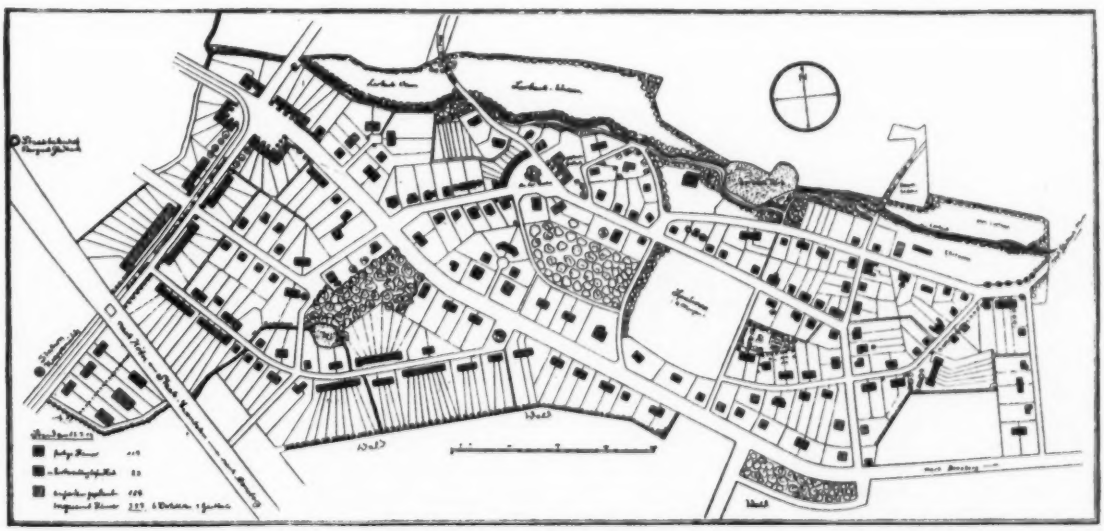


· FIRST · FLOOR · PLAN ·



· SECOND · FLOOR · PLAN ·

GRONAUERWALD—Three-Family House



GRONAUERWALD, NEAR COLOGNE—Town Plan

A Report of the Addresses Made in Western Cities to Further the Recognition of Art

In visiting Central and Western cities in the interest of the Education Committee of the Institute, there were various phases of the subject to be considered in addressing audiences of distinctly different characteristics, yet all were based upon one axiomatic fact, *i. e.,* that the public were, under a democracy, the patrons of the Arts. It naturally followed that the public should acquire some knowledge of the Arts in order to be intelligent in its patronage, and should be given a general opportunity to obtain such knowledge during the period of educational instruction, before the necessary struggle for existence deprived it of the time which would permit study other than that of specific avocations. In order to justify any such attitude in regard to the public, it was requisite to state convincingly the position of the arts as a pervading integral part of life, and that ignorance of them created a positive menace to the complete happiness of a community, because it produced an environment which was sordid and stultifying. It required no skill to elicit a cordial response to such an indisputable statement, and there merely remained an elaboration of the theme, illustrated by pertinent examples of its results, and an appeal for good will and co-operation. There was no attempt to instruct, no isolation of the arts as occult, but on the contrary the recognition of the fact that they were common to all mankind, and that universal opportunity for their study and appreciation should, therefore, be given to all mankind.

It was obvious that the appeal must be made to: First, Educators as representing the policy of action; second, to public servants as representing the Arbiters of Action; third, to the members of Artistic professions as representing the exponents of action; fourth, incidentally, to University students, as being future incumbents in all three of the other classes.

With these initial desires in mind I left Philadelphia after a conference with Mr. Zantzinger, the chairman of the Educational Committee, on the afternoon of Monday, 29 January, and arrived in St. Louis the next evening. There I was met by Mr. Le Baume, and we went at once to a meeting of the St. Louis Chapter, at which there were present some forty-five members. My reception as a representative of the Institute was more than cordial, as it was, in fact, everywhere throughout my trip.

I naturally spoke in regard to their aid as members of Class 3, and especially as to the public service of architects outside of the specific duties of the profession.

The talk and discussion that followed were relating to the importance of calling the attention of legislators, and others who had the disbursement of monies for objects which should be examples of artistic attainment, to the necessity of a knowledge of the Arts in order that the work should be worthy of the objects. It is undoubted that the constant failure to obtain the best results, far from being lack of interest or of desire for good work, comes from uncertainty as to relative merits of proposed achievements. The great importance of providing opportunities for further enlightenment on these subjects was suggested and received instant response.

At this time it was arranged with Professor Ferrand, of Washington University, to address the students and faculty of the Architectural Department on 31 January. At this meeting other members of the University Faculty were present, especially engineers, whom I particularly desired to address, as I frankly told them everywhere that I considered the members of their profession had been in the past and too often were in the present, offenders in neglecting the arts in their work, and stated that I was rejoiced to see a marked change recently in their attitude and knowledge.

The co-operation of architects and engineers was esteemed to be not only desirable but eminently a question of common sense. The more conspicuous a structure, the more careful study in all its phases was desirable, and as great engineering projects were usually isolated, with no adjacent factors which tended to minimize their conspicuous character, they required careful study and skillful design far exceeding their mere utilitarian purpose to make them agreeable objects to the eye. The opportunity for study should be readily obtainable, and the engineering schools were more and more acknowledging an affiliation with the arts which they have long ignored.

On Thursday, 1 February, I addressed the Student body of the University of Kansas, at Lawrence. The large assembly hall was filled. My address to these students was not only in regard to the broadening effect of knowledge of the arts and the resultant refreshing influences on their lives, but also as to their duties as potential citizens with the welfare of the community in their hands, because the character of the environment which they made could either inspire or depress. I cited the remark of Darwin in the latter part of his life, that he regretted narrowing his endeavors entirely to scientific research, as he found he had "lost some of his former keen appreciation of the beauty that was about him," and it was the duty and the privilege of cultivated men to enhance that beauty.

Applause was instantaneous, but this was not a unique example, for the same type of appreciation was everywhere manifest. At 4:30 I met and addressed the President and Faculty, speaking to them in regard to so arranging studies, that wherever possible, and I felt that it was almost universally possible, the relation of the arts to special studies should be recognized in the courses, and as examples cited that in Grammar and Syntax, themes might have some artistic achievements given as subjects, in Physics, the uses of woods, clay products and stone might be considered, and in Chemistry the attention paid in Pottery and Porcelains, etc., and in all Polychromy to their debt to Chemistry, might be reversed and the supreme results of its expression in the Arts be acknowledged, in fact, to show definitely that much of the highest expression of Chemistry appeared in the Arts.

These are only a few of the applications which I made in talking to educators, and a sympathetic response always followed.

In the morning of 2 February, in Kansas City, at the Art Institute, my audience was a general public one, but largely composed of those already interested in the Arts. No exhortation was, therefore, necessary, and my appeal was made for concerted action, rather than for isolated individual endeavor, *i. e.*, that for themselves, and especially for the younger generation, they should let it be definitely known that they did not consider art as either occult, or the prerogative of the few, that they should ask that it be taught as a necessary factor in "the pursuit of happiness," which has, even in the most material conditions, been considered as essential to the well-being of mankind, and that they should maintain that it gave a very high type of happiness, peculiarly devoid of evils, having as its initial attribute, power of idealistic expression.

Its teaching should relate it to every phase of visual expression, should be devoid of isms and be considered a natural factor of civilization.

At 12:45 I was a guest of the City Club at a meeting which was very largely attended, representatives of the Real Estate Exchange and city officials being present.

My theme was based upon the fact that the arbiters of the expenditure of public and private monies were trustees whose duties were that they should solve problems for the permanent public good, not for temporary and ephemeral gain, that opportunism was of distinct value merely as a step to an ultimate carefully considered purpose, far-sighted in its conception. I disclaimed any idea that civic bodies or individuals deliberately desired second rate results, but I claimed that many of the trustees of public monies had had no opportunity given them to learn, which would entitle them to judge between mediocre and admirable propositions. That such a state existed I had the personal testimony of many legislators, trustees and private individuals, whose *amour propre* would not permit them to publicly acknowledge the fact. Hence they were peculiarly subject to charlatanry, which when it became evident, only belittled their opinion of all advice in regard to the arts. There was but one relief from such a condition, and that was a universal knowledge of the arts, not a profound knowledge, but a working knowledge. The condition could not at once be corrected.

The good will and good intention was manifest, but back of it was an ignorance due to lack of opportunity, and neglect in education. I was once asked by a group of Harvard students to define "What is an education?" and every road of approach to that definition led to but one answer, in one word, Altruism.

I recommended to the Real Estate men a consideration of that answer, and also to legislators as considering the best interest of the community, not of local interests. To both an endeavor to increase the knowledge of the coming generations in regard to the subjects of their action, which were very often those of the arts, seemed to be a wise and creditable procedure. In the evening there was a dinner and a largely attended meeting of the Kansas City Chapter, at which my address was similar to that before the St. Louis Chapter.

On Monday, 5 February, at Colorado College, Colorado Springs, I addressed the student body in the morning, again calling the attention of the students to the fact that they were potential makers of their cities, and builders of important buildings and patrons of the arts, and educators. Also, because I had now arrived where cities were in the making, rather than with hampering traditions, that a knowledge of the arts was essential to the beauty of their environment, already so highly endowed by nature.

At 3 p. m. I met the President and Faculty. The talk later took the form of conference with suggestions given for further expansion of studies, for which there was a cordial desire. At 4:30 there was a large audience of the public in the College Hall. The people of Colorado Springs are quite conversant with artistic matters, but they averred that they welcomed inspirational statements, which, to my mind, seemed superfluous, but which they were kind enough to say were welcome.

Their real need seemed to be solidarity, and to that point I limited most of my remarks. At 10:00 in the evening I was at Denver, at the Chappell House, which has been given to the Art Students for their centre. This was an audience made up largely of Art Students, and there was an opportunity to appeal for common action, and for common sense, for a recognition that all the arts were intimately related to each other, and that art students were prone to confine their attention to a limited portion of the gamut of the arts. I cited Prof. Ware's remark that artists "were often queer as they did the thing they liked, and found fault with others for not liking it"—advising them to attempt to have the public, who were their patrons, so informed that they understood the effort of the artists and thought in terms in common with them. Incidentally, this would go far to improve the work of the artists, for the public often possessed a salutary horse-sense. Tuesday, 6 February, was spent at Colorado State University, at Boulder, where the Faculty and entire student body were addressed. The situation of the University is an extremely beautiful one, and wise efforts are being made to correlate the various buildings, and unify the effects. The opportunity is unrivalled. Using these facts as a theme, I made the appeal that not only should they give the object lesson that the University was to be in its entirety, but that its alumni should impart their appreciation of the arts to others. In the evening in the Art Institute at Denver there was a large public audience and all the various ramifications of the beneficial influences of study of the arts were mentioned.

On Wednesday, 7 February, in the morning the Faculty and student body of Denver College were addressed, the students in engineering representing a considerable portion of the audience. While a large part of the address was general in its character, especial attention was paid to the inadequacy of a merely utilitarian solution of any piece of work from a spoon to a bridge, and that the offense of the lack of development increased geometrically with the size of the object. The remarks were received more than graciously, and accepted with apparent enthusiasm.

At noon I had the pleasure of lunching at the Cactus

Club in Denver, and speaking to its members informally. The Club is one of keen and active men of many varied occupations.

There was general appreciation and approbation of the efforts of the Institute, and expression of satisfaction that the encouragement of extension of knowledge of the arts is undertaken.

In the evening at a private house there was a dinner at which were present a number of those interested in artistic projects, the conversation and discussion being general. On Friday, 9 February, I arrived at Salt Lake City, and met and addressed the Utah Chapter.

This Chapter has energy and *esprit de corps,* and is evidently influential in making the recent architecture of the city excellent in character. It more than cordially welcomes speech which would encourage and stimulate attention to the arts, and with that end in view had me address a public meeting, which comprised civic officials. The address was, therefore, more general than specific, and advocated the common-sense attitude that the people, the patrons of the arts, should know something about the arts. As Monday was Lincoln's birthday, although I had arrived in San Francisco, there was no opportunity to speak. On Tuesday I went to Miss Bridge's School at Piedmont. This is a very well known girls' school, which Mr. John Galen Howard desired that I should visit. I spoke upon art in the household and the importance and value of the minor arts, and also upon the unique opportunity which women had, of influencing general taste by the object lessons of the environment which they controlled. Later, at Berkeley, at noon, I spoke to the local Chamber of Commerce, and also to the New Arts and Crafts Society, calling attention to the benefit to the individual of personal work in the minor arts, the consequent broadening of horizons, and its value as an antidote to the inertia or the hysteria that lack of pleasurable occupation induced. The experiences of Chambers of Commerce in advocating artistic expression, and of Arts and Crafts Societies in fostering willing but ignorant and adolescent endeavors were cited. At 2:00 I addressed the Faculty and Students of the Architectural Department at Berkeley State University of California. Naturally there was little to be said, excepting an explanation of the desires and purposes of the Institute, and an appeal for the promulgation of these desires by the Department. The University has 16,000 students and to create an active unit for the advocacy of art in its midst is well worth while. Later in the afternoon I addressed a portion of the Faculty and the Public.

The theme, therefore, was general, and upon many phases of the situation. On 14 February I made a similar address to the Faculty and Students of Stanford University at Palo Alto.

The following Friday I was in Portland, Oregon, and at noon lunched with, and addressed, the City Club. Portland is thoroughly alive to its opportunities and is taking advantage of them. In fact, throughout the West there is a responsive attitude in marked contrast to the anaemic receptive attitude of officials, etc., in many eastern cities.

The results are rapidly becoming evident. Stimulus and encouragement were everywhere welcomed, advice courted. An open-mindedness to co-operation, and a desire to get the best results are characteristic of the West. It has not become muscle-bound and shows no desire for or indication of approaching that complacent condition.

In the afternoon of the 16th I met at a private house a number of influential Portland people who were much interested in the work of the Institute, and at 5:00 went to Reid College and addressed the Faculty and Students. My final informal talk was at the University Club, at a farewell dinner of a number of M. I. T. students.

My journey ended in Boston on 21 February.

Throughout it there was the most cordial co-operation and support. The book, "The Significance of the Fine Arts," was advocated as being of distinct value to both the layman and the student, and many enquiries in regard to it were made, and a number of copies presented to the heads of student bodies.

C. Howard Walker.

When Spring Comes!

When spring comes, birds and men think of their nests: "loud sing cuckoo!" So in New York there has been a flutter of interest in furniture and interior decoration within the last few months: witness the furniture sales in the department stores, the Architectural League's exhibition, the Decorative Exhibition at the Belmaison Gallery, the Seventh Exhibition of Industrial Art at the Metropolitan Museum. For all the freshness and quickness one finds in the designs, all these shows of "modern" work might have been clapped together in a single wing of the Metropolitan, devoted to antiquities; and even if one add Mr. Joseph Urban's decorations at the Wiener Werkstaette, it is plain that our choice in interior decoration lies largely between the stage and the museum, between the spectacular opulence of the Viennese school and the facile piety of the Americans; and anything like a chair, a table, or a wall which is neither stagey nor archæological is out of the picture.

Let us first grant these exhibitions all their conspicuous merits: they exist, and there is doubtless something to be said for them. First of all, they show many pieces of furniture and many strips of textiles that are beautiful and interesting in their own right. There is a quiet perfection in a Colonial dresser, a full richness in a Florentine walnut table, which one would like to see more often; and it is well that our designers and cabinet makers should be conscious of the achieved beauty of earlier designs. In fabricating a reproduction the cabinet maker cannot help appreciating the quality of the craftsmanship that went into the earlier work, and up to a point he cannot help acquiring a little of that craftsmanship, even in the mere act of duplication. More and more our furniture manufacturers are becoming conscious of the shoddiness and lack of refinement in machine production; so the craftsman, driven out the front door by power machinery is coming back through the rear. The production of authenticated antiquities has become an open and respectable trade; it is no longer a piratical

enterprise. So far the influence of the Museum, with its conscious effort to educate the manufacturer and designer, has been helpful and—if one may be candid—purifying.

It would be unfortunate, however, if we exaggerated the power of the Museum models to teach lessons in craftsmanship; for as soon as craftsmanship has a life of its own, as for instance in the ironwork of Mr. Samuel Yellin, it refuses to imitate point by point the original patterns; or if it attempts to imitate them, the very vitality of the designer or the exigencies of his problems will cause new features to be introduced. Mr. Edwin Muir has well said that a living thought cannot utter itself in the same words twice; and the same is true of a living design. In emphasizing form rather than method the Museum's grand effort to educate us in "the best that has been thought and done in the past" turns its back upon the vital problem of our age; namely, how with modern mechanical methods to produce appropriate forms; and so it leaves us in pretty much the same stew that we have been in ever since machine-production took the place of handicraft.

We moderns are cuckoos, and if we do not lay our eggs in others birds' nests we at any rate live our lives in them. Those who can afford the snobbery of antiquity can now dwell in Tudor castles with furniture almost as solid and uncomfortable as Henry VIII's; or they can surround themselves with delicate sophistications in upholstery and painting which have some of the charm of Watteau or all the vulgarity of Louis XV. I daresay that it is better for communities or individuals who have not realized any personal characteristics to dress up in stage costumes rather than to shiver openly in all their uninviting nakedness; but I am not prepared to admit that the present period, for all its dishevelment and disorder, is the æsthetic blank our interior decorators and our museum instructors would have us believe. If those who have achieved power and wealth in the modern industrial world wish to escape from the factory and the office into Tudor mockeries, well and good; if they wish to forget their relations with railroads, ships, blast-furnaces, grain elevators, well and good, too. The fact is that blast-furnaces and grain elevators are more significant to modern æsthetics than the ancient models which our museum habitués favor us with; and I am wondering how long it will be before this perception expresses itself in our interior decoration.

Nothing so clearly demonstrates the futility of museum models, it seems to me, than the timidity of contemporary designers in the face of any commonplace modern problem. I have earnestly hunted around for an electrolier as honest and serviceable and genuinely beautiful as an electric radiator I happen to possess: unfortunately, radiators are designed in conjunction with the machine shop, whereas electroliers are designed in conjunction with the museum, or with the museum at one remove—the library; and one finds a hundred examples of "arty" rubbish in the form of candles, torches, wicks and gas-jets to one successful utilization of the flexible and easily handled instrument an electric bulb is.

I am afraid, alas! that the campaign of education which the Metropolitan Museum is so valiantly conducting will only perpetuate these genteel absurdities and circumlocutions. The result is that we frustrate our genuine artists and craftsmen by condemning them to make copies of antique articles, much as the Roman slave was made to reproduce the statues of Phidias and Praxiteles; while at the same time we attempt to give, by means of machinery, those ultimate touches which craftsmanship used to give to a job out of love and leisure. On one hand we have craftsmanship harnessed to the mechanical reproduction of "models:" on the other, as in the ingenious and murderous machine which produces the spiral legs and columns used by the baroque carpenters, we have machinery devoted in good measure to fake craftsmanship. These are two sides of the formula which perpetuates our insincerity, our unimaginativeness, and our bad taste.

At present, the clean logic of the situation lies between the party of Messrs. Cram and Penty and the other medievalists, with their frank desire to re-establish handicraft conditions in industry and a handicraft culture in society, using the industrial mechanism at the most as one might use an auxiliary engine on a sailboat to beat against the wind; and the modernists who feel that machinery can never be put in its place unless we carry out its precepts and follow its inherent technique exhaustively, taking advantage of all its shortcuts and precisions; so that our beds will be built as soundly as our bridges, and our dwellings will serve their purposes as efficiently as our factories. Most of our current efforts in interior decoration represent not so much a wise compromise between these two points of view as a complete perversion of each of them. Modern interior decoration in America expresses for the most part nothing but our snobbery and servility; and if these are hard words, well, they are hard words, and the facts in back of them are even harder.

Now, a genuine revival of handicraft would probably afford an excellent incentive for new designs, new motifs, and new forms of decoration; indeed, I have recently seen some pottery and furniture from Mexico which shows that even in the New World handicraft continues to live and breathe; but about the prospects for such a revival in these United States it is useless to speculate. We must take what little comfort we can from the movement which Ruskin started in England half a century ago as a sort of backfire against industrialism; as a result of that revival one can purchase a gorgeous handwoven couch-cover at Heal's in London for less than one would pay for the machine-product in New York; and possibly, in time, even in mechanical industry the gasoline engine and the water-driven dynamo will restore the center of gravity to the individual craftsman in his own shop, who will carry a job through for a flesh-and-blood customer, instead of producing, let us say, an endless series of chair-legs for a central factory which in turn supplies a blind market.

The notion that handicraft and cottage production are uneconomical rests on very shaky foundations; what we mean is that handicraft does not lend itself readily to the commercialized multiplication of the cheap and nasty for a world market. From the standpoint of humane living, however, a good part of modern industrialism, with its alternations of intense drudgery and empty unemployment, is uneconomic. It needs only such a shutting off of the market and such an opening up of the

land as is taking place in Central and Eastern Europe to shift the balance of power from the mechanized cities to villages where handicraft rotates with agriculture as a seasonal occupation; and then we shall see what we shall see. Unless a similar change takes place in America, it will be useless to expect any rejuvenation in carpentry, ironwork, stonework, and pottery; handicraft will remain for us a "luxury," a means of achieving conspicuous waste; in short, one of the servile arts, performing a task which neither an independent worker nor an independent artist would willingly set his hand to.

Our real hope for good interior decoration at present rests with the modernists; and yet they have, I confess, little to show us. Here and there one can pick up a single article or a piece of furniture which adequately demonstrates the finished, geometric perfection of machine work; such, for example, was a steel daybed I ran across the other day in which there was not a single element except the genteel mahogany finish to take away from its fine inflexible lines. A kindred honesty and perfection I found in one of Mr. Urban's chairs—an arrangement of pillows on a naked wooden frame; and I dare say that with a little inspiration one might compose a whole room which would exemplify those qualities of niceness and smartness which, as Professor Lethaby has well pointed out, is about all we can expect from the present state of the arts. It is not, let me emphasize, the crude products of industrialism that I am pleading for; the industrialism that created dormitories of procrustean iron beds, acres of plate glass windows, and miles of hideous iron façades. What one really wants is an æsthetic of industrialism, which will give all objects that fulfill a modern purpose or that are created by modern machinery the characteristic form that these means and ends call for.

So far from being inimical to art, the æsthetic of industrialism provides, it seems to me, a remarkable frame for art. Precisely because, if we are faithful to the logic of machinery, we shall have to do away with a host of fake decorations and fake "objets d'art," a certain space is cleared away in the modern house which the painter and the sculptor can fill. The artist today is the only craftsman that we have left whose hands are not devoted to mechanical reproduction. This is his good luck, in that it enables his art to be free, and his misfortune, in that his works have for the most part no destination in society other than the museum or the art gallery. Even if the modern artist's picture at last finds a place in some individual's dwelling, it will be only one "pretty object" amid a galaxy of fine wares, with as much chance of being singled out and enjoyed in a proper mood as it would have in an auction room.

Now, if the artist is to have a half a chance in a modern interior, we must stage *une grande nettoyage*—a spring cleaning—in order to get rid of the oddments and excrescences that appear on our furniture, in the design of our textiles, and where not. The artist asks for nothing better than that the chairs, tables, hangings, walls, and ceilings should be nothing more than harmoniously arranged planes of reticent tone. In such a milieu paintings and pieces of sculpture will stand out properly—will stand out as well as a kakemono in the bare interior of a Japanese apartment. Indeed, if the exhibitors at the Architectural League would only attempt to contrive to furnish a couple of rooms which would solely attempt to show modern pictures, wall decorations, and statues to utmost advantage, we might be spared so many essays in pseudo-antiquity on the part of the furniture makers, whilst we stimulated and attracted a group of genuine artists, something above the level which the League so abundantly shows. What is the promise of our mechanical age? Is it not this: that by turning out a hundred things that are similar, the machine gives us the freedom and leisure to produce the one thing that is unique? Translated into interior decoration, this would mean that the major part of our domestic apparatus might in time become as similar as—let us say—our kitchen equipment, while in due compensation a great many people might possess pictures and sculptures which now can be bought and appreciated only by a few. Thus we should humanize industrialism, perhaps, by carrying it to its conclusions; and so far from impoverishing ourselves and starving the artist, we should find the artist again at the center of things, and we should be surrounded by his creations.

LEWIS MUMFORD.

Pre-Convention Notes

The Fifty-sixth Annual Convention of the American Institute of Architects will be held in Washington, D. C., 16-18 May, and will not only mark another chapter of Institute history, but will most certainly give a new imprint to this annual gathering of the profession.

During the last few years a great deal of thought and inquiry has been given to the question of how to provide a convention that would yield the greatest amount of enjoyment to the largest number of delegates. The subject has been canvassed in the columns of the JOURNAL, and in almost every meeting of the Board of Directors it has been in order to consider this matter. Out of all these inquiries one belief has steadily seemed to take a definite form and shape,—that the majority of the delegates wished to condense as far as possible the purely business sessions of the convention so that the rest of the time could be left for developing an atmophere more architectural in character than that which pervades the convention room when the old and very hackneyed subjects are before the delegates.

The present one offers a peculiarly happy coincidence, because for the third time in its history the Institute will present its gold medal to one of its members. Mr. McKim received the medal in 1909, and it was given to Mr. Post in 1911. Now Mr. Henry Bacon is to become the happy possessor of this distinguished emblem as a tribute for his design of the Lincoln Memorial.

Thus the award of the medal will actually take place within the portals of the building itself, and it is planned to make this occasion one of great impressiveness.

The ceremonial pageant which is being planned under the direction of a special committee composed of Mr. Howard Greenley, Chairman, and Mr. Monroe Hewlett, is already busily occupied with the details. It is planned

to have a procession composed of the officers and members of the Chapters present at the convention, together with the representatives of all the craft and trade organizations that participated in the work of executing the building. So far as the plans have developed at present, it seems probable that the participants in the pageant will assemble at the east end of the Lagoon and then proceed in two divisions on either side of the Lagoon to a central meeting point in front of the Memorial. The Chapters are being asked to provide a special banner and pennon, significant of the State from which they come and embodying such traditions as may be worthy. It is also expected that a suitable simple robe will be provided for those taking part in the pageant.

It seems very likely that official Washington will be represented at the ceremony, and certainly it is true that the setting offered by the location of the Memorial, which faces the Lagoon and the Washington Monument and the far stretch of the Mall on one side, and the Potomac River and the wooded hills of Arlington on the other side, is one nobly designed to lend an impressive architectural aspect to the event.

So far as the sessions of the convention are concerned, while the details are not yet complete, it is to be noted that the morning sessions only are to be devoted to business. The rest of the time is to be set apart for the various exhibitions, special meetings, illustrated addresses, the scheme of which was finally reviewed by the Executive Committee at its session in Charleston, South Carolina on March 30, 31, 1923, too late for inclusion in this issue of the JOURNAL.

During the Convention week an exhibition is to be held in that part of the Corcoran gallery immediately above the Convention Hall known as Gallery "A." The exhibition is to be confined to exhibits of the work of those who have received gold medals of the Institute, or the Allied Arts or Crafts medal. The work shown will include drawings and photographs of the work of Henry Bacon, cartoons and illustrations of the work of Arthur F. Mathews of San Francisco, mural decorator; examples of the work of Samuel Yellin of Philadelphia; exhibits of typography by F. W. Goudy, and the tile work of Henry C. Mercer of Doylestown; and, it is hoped, some examples of the work of the sculptor, Paul Manship, though Mr. Manship's absence for the year in Europe makes it difficult to get adequate representation.

The Board rooms of the Octagon will also contain a special exhibit of Swedish architecture, chosen by the Society of Technology of Sweden and sent to America under the auspices of his Royal Highness, Prince Christian. This exhibit will probably be formally opened by the Swedish Ambassador in Washington.

Dr. C. Howard Walker has very kindly consented to give a talk, illustrated by stereopticon views, at one of the evening sessions.

A Correction

"The American Vitruvius: An Architect's Handbook of Civic Arts," was recently reviewed in the JOURNAL, and in error William Helburn was noted as publisher. The work was brought out by the Architectural Book Publishing Company of New York.

Public Information Page

THE THIRD ANNUAL Own Your Home Exposition will be held at the Coliseum, Chicago, on the 24-31 March next. The architectural committee collaborating is as follows: Mr. R. C. Spencer, Chairman, and Messrs. R. S. De Golyer, Charles H. Hammond, J. C. Llewellyn, Elmo C. Lowe, and F. W. Puckey.

THE COLORADO CHAPTER has been actively interested in obtaining beneficent legislation affecting the State licensing law. It is also interesting itself in the Denver Atelier which sends designs to the Beaux Art Institute of Design and in the Denver Art Association.

THE DAYTON CHAPTER has inaugurated a scheme to assist the Small House builder. Each member prepared a complete set of drawings for a small residence, which were turned over to the Chamber of Commerce to be sold at a nominal fee. A sufficiently large number of these plans were sold, houses being built from them to warrant the efforts which were made. The Chapter expects to press this work locally in the hope of changing the viewpoint of the Small House Builder. Some interesting articles have been prepared for the Press, and the Chapter believes that it has had some success in the way of publicity.

THE KANSAS CITY CHAPTER has been doing notable work through the *Kansas City Star* and in other local publications. The local press now appreciates the fact that an architect's name should always be associated with mention of his buildings. Ernest O. Brostrom, Goldwin Goldsmith and other energetic members of this Chapter deserve mention on account of the splendid energy they have shown in these matters. The afternoon lectures at the Art Institute are being continued, and are meeting with marked success.

THE RHODE ISLAND CHAPTER is working on a bill for the licensing of architects and a zoning ordinance for Providence. This Chapter is also assisting the City Council in the preparation of a new building code for Providence.

THE TEXAS CHAPTER is planning an exhibition at the Dallas Architectural Club for early April. It is hoped to use specimens of the work exhibited in connection with a newspaper campaign.

JOHN V. VAN PELT, *Chairman,*
126 East 59th Street, New York City.

The twenty-sixth architectural exhibition of the Philadelphia Chapter and the T Square Club of Philadelphia will be held 12th to 27th May, at the Art Alliance Galleries. Exhibits will include drawings, models and photographs of proposed or executed work, or structural, decorative and landscape architecture; academic drawings; sketches and paintings of decorative subjects. Three nationally known architects compose the Jury of Selection. All accepted exhibits will be subject to publication in the Year Book, and shall remain throughout the exhibition.

London Letter

The advent of the New Year has naturally brought forth the expression of hopes for better prospects in the building industry; and in addition some interesting reviews of progress in the past combined with concrete suggestions for the future. 1922 has been for Europe a year of almost universal misfortune, and the building industry in England cannot be said to have been in the enjoyment of a period of prosperity. At the same time there is no doubt that the end of the year has witnessed an increase of optimism and a few tangible signs of improvement.

There are very reasonable grounds for hope for the future. The deflation in wages from the immediate post-war standard has been arrived at with a remarkable absence of ill-feeling between operatives and employers. The level which wages have reached is one approaching finality, resulting in a feeling of stability as regards present day building values which is encouraging to the building owner. In fact building is once more becoming a practical proposition. On the other hand there still remain the high prices of certain building commodities which can only be brought down by free competition with the assistance of architects and discriminating specifications.

One great difficulty seems to be the maintenance of reduced working hours in the shape of the forty-four-hour week. The increase in overhead charges caused by the forty-four-hour week reacts strongly on the cost of production, and there is a feeling in many quarters that the week should be increased in the summer months, giving a total average for the year of forty-seven to forty-eight hours. Certainly some extraordinary results have been obtained by small non-federated builders who sub-let their trades on the basis of piece-work, and while this method is generally unpopular there seems to be no valid objection to the system of "bonus on output."

THE EXHIBITION of Contemporary British Architecture held at the Galleries of the R.I.B.A. has helped the cause of architectural propaganda in England. It was well reviewed by the Press, where it was frequently remarked that there are a great many architects doing excellent work whose names are yet completely unknown to the public.

On the occasion of the exhibition of these drawings and photographs in the United States there were certain to be some expressions of disappointment. England has suffered since the war from a dearth of large building enterprises, and the absence of new "monumental" work from the exhibition is thereby explained. Gilbert Scott's Liverpool Cathedral, the London County Hall by Ralph Knott, and the Port of London Authority Building by the new Knight, Sir Edwin Cooper, are all familiar as pre-war designs. The younger generation has as yet had no opportunity to express itself in large buildings. The result is the presence, in the exhibition, of a limited number of familiar large works, and a larger proportion of new domestic buildings which reach a satisfactory level of merit. There are many notable absentees from this exhibition, the importance of which was overlooked by many habitual exhibitors, but on the other hand some "lesser lights" have been allowed a welcome opportunity. The exhibition jury made its selection by invitation and also by competitive elimination.

Every visitor formed his own judgments, but it may be interesting to know that amongst the exhibitors are several whose work is being followed with particular keenness by the younger architects. Amongst these may be mentioned Gilbert Scott, Sir John Burnett, Sir Robert Lorimer, Robert Atkinson, Clough Williams-Ellis. The influence of Rickards and Brewer lives after them in the stones of the buildings on which they imprinted their personalities.

THE CELEBRATION of the Wren Bicentenary was the occasion of some light irony in the public press at the expense of architects.

It appears that the Royal Institute decided to hold a "Wren Ball" in connection with the ceremonies in honor of Sir Christopher, with the very laudible intent of handing over the proceeds to the Dean and Chapter of St. Paul's to assist the Cathedral Restoration Fund.

In order to lend impressiveness to the ball it was proposed to hold it in the City Guildhall, to which end it became necessary to approach the City Fathers assembled in conclave. Unfortunately the proposition seems to have been brought forward in the absence of its R.I.B.A. sponsors, with the result that the spirit of the Institute scheme was entirely missed. A wave of indignation is said to have passed over the meeting as one indignant City Father asked whether architects always celebrated the death of their great men by dancing!

But the ball was held all the same—in the Institute Galleries.

A SEVERE, though perhaps only temporary reverse has been inflicted on those members of the R.I.B.A. who are espousing the cause of architectural Registration without prior Unification of the profession.

At a general meeting of the Institute called towards the end of January, the Council asked for approval of the proposal to place before Parliament a Registration Bill, the draft of which had been previously widely circulated in the Institute.

The result of the voting was a severe defeat for the Council. The proposal for a Registration Bill which is not completely supported by the architectural societies as a whole was rejected by a two to one majority.

Expert opinion sees no hope for the acceptance by Parliament of a bill which has not the united support of the entire profession behind it.

"X"

February, 1923.

Structural Service Department appears on the second right hand page following

Structural Service Department

SULLIVAN W. JONES, *Associate Editor*
LEROY E. KERN, *Assistant*

In connection with the work of the Committee on Structural Service of the American Institute of Architects and in collaboration with other professional societies and organized bodies having the same objective—improvement in building materials and methods and better shelter for humanity in all its manifold vocations and avocations

Abstracts

It is the purpose of the Structural Service Committee and THE JOURNAL *jointly to give, in this division each month, brief abstracts of all publications by the Government Departments and Bureaus, University and other research laboratories, States and Associations, which contain fresh information in regard to materials or methods employed in construction and thus accord architects and others a convenient means of keeping themselves conversant with rapidly expanding knowledge in the technique of construction.*

Differences Between Heartwood and Sapwood. (19a)—(*Forest Products Laboratory Technical Note No.* 189.) Sapwood is the outer light-colored portion of a tree trunk through which the water passes from the roots to the leaves, and in which excess food is stored temporarily. Heartwood is the central core of the trunk. In most woods the heartwood can be distinguished from the sapwood by its darker color. But in hemlock, aspen, cottonwood, some beeches, all spruces except Sitka spruce, basswood, holly, hackberry, tupelo gum, and the true firs (not Douglas fir), there is very little difference in the color of the heartwood and the sapwood.

As new sap is formed on the outside of the tree trunk, the inner sapwood changes to heartwood. During this change the living cells die; the pores of some woods become plugged up with a froth-like growth, known as "tyloses"; and the cell walls, and in some species the cell cavities, become infiltrated with various substances, some of which darken the wood. These infiltrations do not add appreciably to the weight of the wood, except in species like ebony and rosewood in which the pores become filled with deposits.

In over 500,000 tests which have been made by the Forest Products Laboratory, Madison, Wisconsin, on the various species of woods grown in the United States, no effect upon the mechanical properties of the wood due to its change from sapwood into heartwood has ever been noticed. The heartwood of the oak, pine, and other structural timbers is not intrinsically stronger than the sapwood, as has often been supposed to be the case; nor is the sapwood of hickory and ash intrinsically stronger than the heartwood, as is sometimes claimed in connection with handle stock.

The essential differences between heartwood and softwood are as follows:

Heartwood, as a rule, is more durable than sapwood in damp locations and less subject to attack by stain and mold-producing fungi. It usually is colored and therefore considered more ornamental than the white sapwood, except in a few cases; in yellow pine interior finish and maple flooring, for example, the white sapwood is preferred. Heartwood is less permeable to liquid and therefore more suitable for tight cooperage, tanks, and conduits; and it responds more slowly to changes in atmospheric humidity, which often is of advantage when uncoated wood is exposed for a relatively short time to a different humidity. The heartwood of some species contains more valuable extractable materials, such as tannin and dyes, than does the sapwood.

Sapwood, as a rule, takes preservative treatment better than heartwood. It seasons faster, but when green usually contains a larger percentage of moisture which often makes it heavier. Because sapwood is the outer portion of the tree it contains few common defects, such as knots, shakes, and pitch streaks. In resinous species the sapwood usually contains less resin than the heartwood. Sapwood is more free from odor and taste, which may be an advantage in some cases, and a disadvantage in other cases.

What Is Meant by "Hardwoods" and "Softwoods." (19a1)—(*Forest Products Laboratory. Technical Note No.* 187.) No definite degree of hardness divides the "hardwoods" from the "softwoods." In fact, the only absolute distinction which can be made between the two classes of wood has nothing to do with their hardness or softness. The terms are simply one of several pairs of popular descriptive names in use for referring to trees of the two great groups botanically known as the Angiosperms and the Gymnosperms.

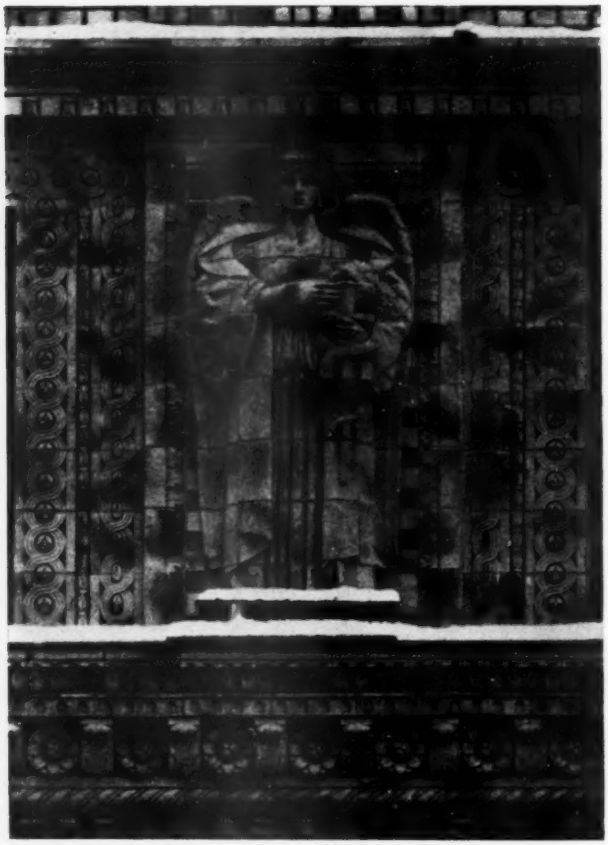
The botanical distinction between these groups, which is that the seeds of the Angiosperms are enclosed in pericarps and the seeds of the Gymnosperms are exposed, is in itself of no commercial importance. But there are numerous general differences which make it necessary for wood users constantly to refer to Angiosperms and Gymnosperms by some name or other. Differences in structure, appearance, properties, size, and quality of the timber and in regions of growth keep the woods of the two groups more or less separated, from the logging operation down through the manufacturing process to the ultimate use.

The terms "hardwoods" and "softwoods" are the most generally accepted popular names for the two classes of trees, although they are perhaps the most misleading. It is true that many Angiosperms, such as oak, hickory, sugar maple, and black locust, are notably hardwoods, and that many Gymnosperms, such as most pines and spruces, are rather soft woods. But there are a number of outstanding exceptions. Basswood, poplar, aspen, and cottonwood, which are all classified as hardwoods, are in reality among the softest of woods. Longleaf pine, on the other hand, is about as hard as the average hardwood, although it is classified as a softwood. Yew, another so-called softwood, is about three times as hard as basswood and considerably harder than most oaks.

Another common name for the Gymnosperms is "conifers." This is more accurate than "softwoods," as all native Gymnosperms except the yew are cone-bearing trees.

Gymnosperms are sometimes spoken of as "the evergreens" and Angiosperms as "the deciduous trees," from the fact that most trees in the former group keep their foliage the year round and most of those in the latter group lose their leaves during the fall or winter months. The exceptions among the softwoods are bald cypress and tamarack, which have no leaves in winter. With hardwoods it is more or less a matter of climate. Many tropical hardwoods are green the year round.

The most accurate popular descriptions of the two groups



Detail at Fifth Story

Random Fire Flashed

The Pershing Square Building, designed by York & Sawyer and John Sloan, is New York's newest skyscraper.

The building occupies the city's most valuable site—probably the most valuable building site in the world—on 42nd Street, opposite the Grand Central Terminal.

The Pershing Square Building is entirely of Atlantic Terra Cotta and wire-cut brick. The Terra Cotta is rough in texture, gray with random fire flashes of golden brown. Dark faience colors are used to accentuate natural shadow in some of the lower story detail. The jointing is in small scale.

The Atlantic Terra Cotta harmonizes with the brick in color, texture and scale.

Atlantic Terra Cotta Company
350 Madison Avenue, New York

Southern Factory
Atlanta Terra Cotta Company
Atlanta, Georgia

Largest Manufacturers of Terra Cotta in the World

are "trees with broad leaves" for the Angiosperms and "trees with needles or with scale-like leaves" for the Gymnosperms. These are the definitions generally given by dictionaries for hardwoods and softwoods, or hardwoods and conifers. They divide woods almost exactly in accordance with the botanical grouping. The few Gymnosperms, such as ginkgo, which have broad leaves are not native to this country.

A difference in cellular structure which has been found to exist between the commercial Angiosperms and Gymnosperms is a very reliable means of distinguishing between the two groups, the hardwoods being called the porous and the softwoods the nonporous woods. The term "porous" refers to the presence of certain comparatively large open-end cells or pores in the wood, in addition to the small closed-end cells, or fibers. These large specialized cells are found in practically all Angiosperms, their function being to conduct sap from the roots to the leaves. The Gymnosperms have developed no pores for this purpose, but use their fibers to elevate sap.

U. S. Govt. Specifications for Interior Varnish. (25b11)—(*Circular of the Bureau of Standards No.* 117. *Federal Specification Board Standard Specification No.* 22. *Size* 7″ x 10″. *Pages* 6.) The varnish shall be suitable for general interior use, including both rubbed and unrubbed finish, exclusive of floors. It must be capable of easy application with a brush in the ordinary manner according to the rules of good standard practice, must flow out to a good level coat free from runs, sags, pits, or other defects, and dry with reasonable promptness to a hard, somewhat elastic glossy coating which can be rubbed in 48 hours or less. The manufacturer is given wide latitude in the selection of raw materials and processes of manufacture, so that he may produce a varnish of the highest quality. The varnish must meet the following requirements:

Appearance.—Clear and transparent.

Color.—Not darker than a solution of 3 g of potassium dichromate in 100 cc of pure sulphuric acid, specific gravity 1.84.

Flash Point (*Closed Cup.*)—Not below 30 degrees C. (85 degrees F.).

Non-volatile Matter.—Not less than 45 per cent by weight.

Set to Touch.—In not more than 4 hours.

Dry Hard.—In not more than 24 hours.

Dry to Rub.—In not more than 48 hours.

Toughness.—Film on metal stand must stand rapid bending over a rod 2 mm (⅛ inch) in diameter.

Working Properties.—Must have good brushing, flowing, covering, leveling, and rubbing properties, and must show no impairment of luster or other defect when used where natural or illuminating gases are burned or when subjected to air currents during the process of drying or application.

Water Resistance.—The dried film must stand application of cold water for not less than 18 hours without whitening or showing other visible defect.

This circular also contains specification for sampling, laboratory examination, basis of purchase.

U. S. Govt. Specification for Basic Sulphate White Lead, Dry and Paste. (25a21)—(*Circular of the Bureau of Standards No.* 85. *Federal Specifications Board. Standard Specification No.* 6. *Size* 7″ x 10″. *Pages* 9.) Basic sulphate white lead may be ordered in the form of dry pigment or paste ground in linseed oil. Material shall be purchased by net weight.

(*a*) *Dry Pigment.*—The pigment shall be the sublimed product prepared from lead sulphide ores, free from impurities and adulterants, and shall meet the following requirements:

Color.—Color Strength. When specified shall be equal to that of a sample mutually agreed upon by buyer and seller.

	Minimum Per Cent	Maximum Per Cent
Coarse particles:		
Retained on standard No. 325 screen	....	1.0
Composition:		
Lead oxide	11.0	18.0
Zinc oxide	....	9.0
Total impurities, including moisture	....	1.0

The remainder shall be lead sulphate.

(*b*) *Pastes.*—The paste shall be made by thoroughly grinding the dry pigment with pure raw or refined linseed oil.

The paste as received shall not be caked in the container and shall break up readily in oil to form a smooth paint of brushing consistency. It shall mix readily in all proportions without curdling with linseed oil, turpentine, or volatile mineral spirits or any combination of these substances.

The paste shall consist of:	Minumum Per Cent	Maximum Per Cent
Pigment	89	91.0
Linseed oil	9	11.0
Moisture and other volatile matter	..	0.7
Coarse particles and "skins" (total residue retained on No. 325 screen, based on pigment)	..	1.5

This circular also contains specifications for Sampling, Laboratory Examination of Dry Pigment, Laboratory Examination of Paste, Reagents.

U. S. Govt. Specifications for Basic Carbonate White Lead, Dry and Paste. (25a21)—(*Circular of the Bureau of Standards No.* 84. *Federal Specification Board. Standard Specification No.* 5. *Size* 7″ x 10″. *Pages* 8.) Basic carbonate white lead may be ordered in the form of dry pigment or paste ground in linseed oil. Material shall be purchased by net weight.

(*a*) *Dry Pigment.*—The pigment shall be the product made from metallic lead and shall have a composition corresponding approximately to the formula $2PbCO_3\ Pb(OH)_2$. It shall be thoroughly washed after corroding, shall be free from impurities and adulterants, and shall meet the following requirements:

Color—Color strength.—When specified, shall be equal to that of a sample mutually agreed upon by buyer and seller.

	Minimum Per Cent	Maximum Per Cent
Coarse particles retained on Standard No. 325 screen	....	1.0
Lead carbonate	65.0	75.0
Total impurities, including moisture	....	2.0

(*b*) *Paste.*—The paste shall be made by thoroughly grinding the above described pigment with pure raw or refined linseed oil.

The paste as received shall not be caked in the container and shall break up readily in oil to form a smooth paint of brushing consistency. The paste shall consist of:

The Book that thousands have sent for!

Attention is now being directed—through publicity and exhibits—to complete house-wiring and quality wiring devices installed by dependable and experienced contractors.

The booklet—"The Home of a Hundred Comforts"—which thousands of prospective home builders have sent for, is available to architects upon request. Address Section 1-4, Merchandise Department, General Electric Company, Bridgeport, Connecticut.

HER EYE IS ALWAYS ON COMFORT

Architects are today directing the client's attention to the need for more outlets and switches and insisting upon greater completeness in the whole wiring scheme.

They are carefully planning complete convenience wiring so that the client will be able to use all the electrical conveniences which she now has or expects to have, and in the most convenient manner.

The more extensive use of electricity in the home calls for dependable devices. G-E Reliable Wiring Devices, nationally known as the standard of excellence are the assurance of constant, dependable electrical service.

There is a G-E Wiring Device for every requirement in every class of building.

Merchandise Department
General Electric Company
Bridgeport, Connecticut

G-E WALL ELEXIT OUTLET FOR "PLUGGING IN" SIDE LIGHTS OR ELECTRICAL APPLIANCES.

G-E TWIN CONVENIENCE OUTLET FOR SIMULTANEOUS USE OF TWO DEVICES.

GE Wiring Devices

A GENERAL ELECTRIC PRODUCT

41-217

	Minimum Per Cent	Maximum Per Cent
Pigment	90	92
Linseed oil	8	10
Moisture and other volatile matter	..	0.7
Coarse particles and "skins" (total residue retained on No. 325 screen based on pigment)	..	1.5

This circular also contains specifications for Sampling, Laboratory Examination of Dry Pigment, Laboratory Examination of Paste, Reagents.

U. S. Govt. Specifications for Iron-Oxide and Iron-Hydroxide Paints. (25a25)—(*A Circular of the Bureau of Standards No.* 93. *Federal Specification Board. Standard Specification No.* 13. *Size* 7" x 10". *Pages* 8.) This specification applies to iron-oxide and iron-hydroxide paints of red and brown colors. The paint may be ordered in the form of either semipaste paint or ready-mixed paint.

The basis of purchase may be either by net weight or by volume (231 cubic inches to the gallon).

(*a*) *Pigment.*—The pigment in both semipaste and ready-mixed paint shall be very finely ground iron oxide, iron hydroxide, siliceous minerals or a mixture thereof, to which carbon pigment may be added, if necessary, to produce the required color. It must be free from organic coloring matter (dyes or lakes). The pigment shall show an analysis not less than 30 per cent of ferric oxide (Fe_2O_3). The total of the ferric oxide, insoluble siliceous matter, and loss on ignition shall be not less than 9 per cent.

(*b*) *Liquid.*—The liquid in semipaste paint shall be entirely pure, raw or refined linseed oil; in ready-mixed paint it shall contain not less than 75 per cent pure linseed oil, the balance to be combined drier and thinner. The thinner shall be turpentine, volatile mineral spirits, or a mixture thereof.

(*c*) *Semipaste.*—Semipaste shall be made by thoroughly grinding the pigment with pure raw or refined linseed oil. The semipaste is received, and three months thereafter shall be not caked in the container and shall break up readily in linseed oil to form a smooth paint of brushing consistency. It shall mix readily with linseed oil, turpentine, or volatile mineral spirits, or any combination of these substances, in all proportions without curdling. The color and hiding power when specified shall be equal to that of a sample mutually agreed upon by buyer and seller. The weight per gallon shall be not less than 13½ pounds. The paste shall consist of:

	Maximum Per Cent	Minimum Per Cent
Pigment	72.0	68.0
Linseed oil	32.0	28.0
Moisture and other volatile matter	0.7	....
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment[a])	0.5	....

a. The No. 200 screen is the same as the screen formerly known as 200 mesh.

(*d*) *Ready-mixed Paint.*—Ready-mixed paints shall be well ground, shall not settle badly or cake in the container, shall be readily broken up with a paddle to a smooth, uniform paint of good brushing consistency, and shall dry within 18 hours to a full oil gloss, without streaking, running, or sagging. The color and hiding power when specified shall be equal to those of a sample mutually agreed upon by buyer and seller. The weight per gallon shall be not less than 12 pounds. The paint shall consist of:

	Maximum Per Cent	Minimum Per Cent
Pigment	57.0	53.0
Liquid (containing at least 75 per cent linseed oil)	47.0	43.0
Water	0.5	....
Coarse particles and "skins" (total residue retained on No. 200 screen based on pigment)	0.5	....

This circular also contains specifications for Sampling, Laboratory Examination, Semipaste, Analysis of Pigments, Laboratory Examination—Mixed Paints, Reagents.

U. S. Govt. Specifications for Turpentine. (25a12)—(*Circular of the Bureau of Standards No.* 86. *Federal Specifications Board, Standard Specification No.* 7. *Size* 7" x 10". *Pages* 11.) These specifications apply both to the turpentine which is distilled from pine oleoresins, commonly known as gum spirits or spirits of turpentine, and to turpentine commonly known as wood turpentine, which is obtained from resinous wood, whether by steam or by destructive distillation. When ordering under these specifications, the purchaser shall specify whether (a) gum spirits or (b) wood turpentine is desired. When wood turpentine is specified, it may be stated whether steam or destructively distilled wood turpentine shall be furnished.

Turpentine shall be pure and conform to the following requirements:

Appearance.—Shall be clear and free from suspended matter and water.

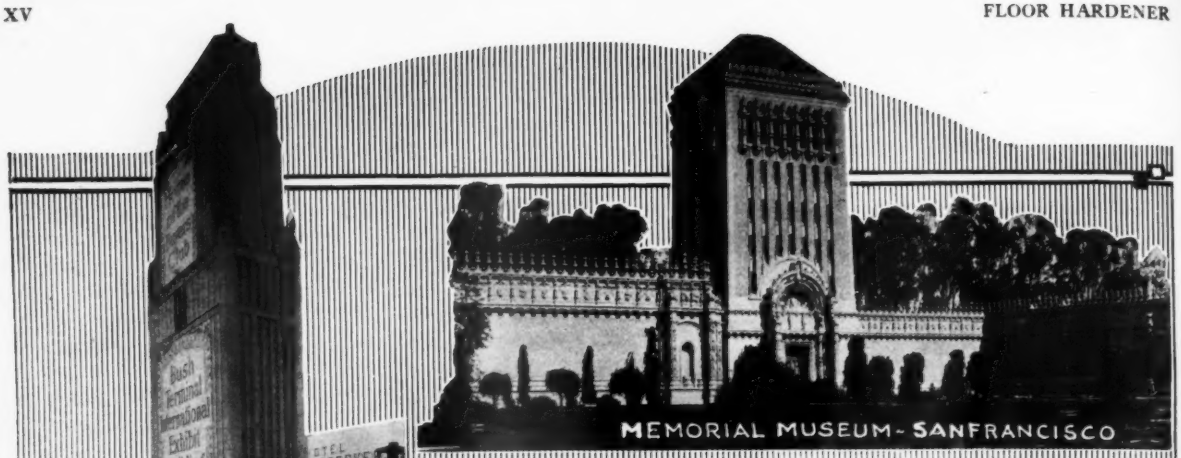
Color.—Shall be "standard" or better.

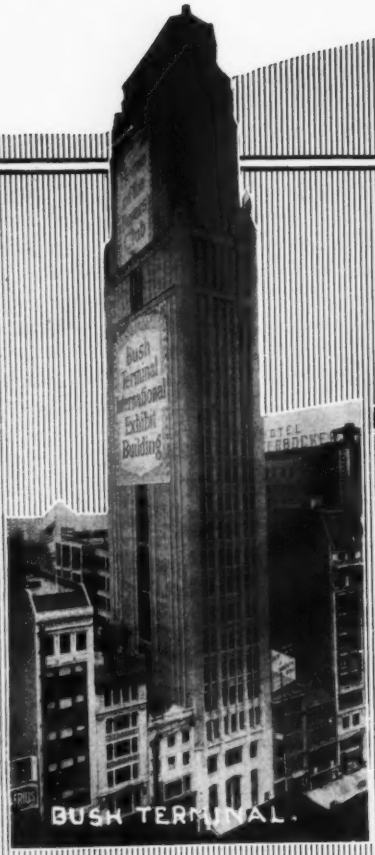
Odor.—Shall be characteristic of the variety of turpentine specified and, if desired, shall conform to the odor of the sample agreed upon.

	Maximum Per Cent	Minimum Per Cent
Specific gravity, 15.5/15.5 degrees C	0.875	0.862
Refractive index at 20 degrees C, gum spirits	1.478	1.468
Refractive index at 20 degrees C, wood turpentine	1.478	1.465
Residue after polymerization with 38 NH_2SO_4	....	....
Gum spirits	....	....
Volume (per cent)	2.0	....
Refractive index at 20 deg. C	....	1.500
Wood turpentine	....	....
Volume (per cent)	2.5	....
Refractive index at 20 deg. C	....	1.480
Initial boiling point at 760 mm pressure (per cent)	160.deg. C	150.deg. C
Distilling below 170 deg. C at 760 mm pressure (per cent)	....	90

This circular also contains specifications for detection and removal of separated water, sampling, laboratory examination and basis of purchase.

Recommended Minimum Requirements for Small Dwelling Construction. (40b)—(*Report of the Building Code Committee of the Department of Commerce. Published by the Bureau of Standards. Pages* 100. *Illustrated.*) Investigations by a Congressional Committee during 1919 and 1920 disclosed that existing building laws through variations and inconsistencies of their provisions and through unduly restrictive or expensive requirements, were operating





Famous Institutions Use Famous Floors

This thing we call fame, what builds it?

Men gain fame by what they do. A building is celebrated for what men did to make it what it is.

Isn't it significant that the concrete floors in the great majority of notable buildings are dustless, wear-proof floors built by the Master Builders method.

A reputation is not built in a day—each of the last fifteen years has proven conclusively the permanence of Masterbuilt Floors—and thus fame is built. Letter after letter records this fact from the user's viewpoint.

For you we have especially prepared literature and photographs of famous floors in famous buildings.

The Master Builders Company
General Offices: Cleveland, Ohio
Sales Offices in 80 Cities

Masterbuilt Floors

Users—More than 31,000—all glad their floors are Masterbuilt.
Feet—225,000,000 Sq. Ft.—hard, sound and dustless.
Time—15 years of unqualified success.
Life—Nobody knows how long—but 15 years to date.

Masterbuilt Floors

Wearproof **Waterproof** **Dustproof**

to prevent needed activity in the building industry. That these conditions might be remedied, a committee of experienced architects and engineers was organized by Secretary Hoover, to investigate building practice and code requirements and to prepare standard building regulations based on the latest and best information, which might be recommended to cities and states adopting or revising building codes.

The first report of this Committee presents recommendations for the construction of one and two-family dwellings having exterior walls of solid or hollow masonry, concrete, and frame, the latter including veneer and stucco surfaces.

In order that its recommendations might have sound bases of information and opinion, the committee obtained the cooperation of nearly one hundred architectural and engineering societies, builders' exchanges, and industrial organizations producing building materials. Special questions also were referred to large groups of individual engineers, architects, building officials, to the Bureau of Standards, and to others whose experience qualified them to discuss such subjects. Tentative recommendations were drafted and submitted widely for discussion and criticism by those interested in the work, and the final report reflects the influence of this consideration.

The Committee recommends that building codes permit 8-inch solid brick and 6-inch solid concrete walls for 2½ and 3-story dwellings accommodating not more than two families each; that 8-inch hollow building tile, hollow concrete block, or hollow walls of brick (all rolok) shall not exceed 20 feet in height to the gables; and that frame construction be limited to 2½ stories. Metal lath and plaster on wood studs properly firestopped is approved for party and division walls, but at least every alternate wall in row houses must be 8-inch solid brick or concrete or 12-inch hollow building tile, concrete block, or hollow wall of brick.

Requirements for quality of hollow masonry units agree fairly well with present practice, but those for brick are somewhat below the medium grade established by the American Society for Testing Materials. The report recommends revised working stresses for timber used in dwellings, based on investigations of the U. S. Forest Products Laboratory. Live loads to be required as bases for design are 40 pounds per square foot for floors of wood, and 30 for those of monolithic type, or of solid or ribbed slabs. Foundation walls of brick are required to be 12 inches thick for excavated enclosures, and similar concrete walls shall be as thick as the walls they support but not less than 8 inches. Special hollow building tile 12 inches thick is permitted for foundation walls of frame buildings. Detailed recommendations are given for firestopping and chimney construction, also for the treatment of built-in garages.

The recommended requirements are followed by a lengthy appendix containing explanatory material and much educational matter for the guidance of builders, with particular reference to the merits of 8-inch and 12-inch masonry walls, use of lumber, stucco construction, plastering, and other important subjects.

The Committee is composed of the following members: Ira H. Woolson, Chairman; Consulting Engineer, Nat'l Board of Fire Underwriters, New York, N. Y.; Edwin H. Brown, Architect, Minneapolis, Minn.; William K. Hatt, Professor of Civil Engineering, Purdue University, Lafayette, Ind.; Rudolph P. Miller, Formerly Sup't of Buildings, New York, N. Y.; John A. Newlin, in charge of Section of Timber Mechanics, Forest Products Laboratory, Madison, Wis.; Ernest J. Russell, Architect, St. Louis, Mo.; Joseph R. Worcester, Consulting Engineer, Boston, Mass.

Electric Service from Rural Transmission Lines. (31)—(*Iowa State College of Agriculture and Mechanic Arts. Bulletin No.* 47 *by A. B. Campbell. Pages* 24. *Size* 5¾″ x 8½″.) This bulletin has been prepared for those interested in extending electric service from the transmission lines and central stations with rural communities.

Synopsis.—The application of electricity on the farm. How electrical energy is carried to the rural districts. Plans followed in serving rural districts. How to proceed to obtain rural service. Line construction specifications. Selection of voltage for rural lines. Transformers. Metering on farm lines. House wiring. Lamps and fixtures. Interference with telephone lines. Factors involved in cost of rural service.

Operating a Home Heating Plant. (30)—(*U. S. Dept. of Agriculture. Bureau of Public Roads. Farmers' Bulletin No.* 1,194 *by A. M. Daniels. Pages* 28. *Size* 6″ x 9″. *Illustrated.*) Many home heating plants are burning more fuel than they should or are not heating the house satisfactorily. This may be due to the selection of a plant of the wrong design, size or type, faulty installation, poor operation, or to loose fitting doors and windows. In this bulletin the requirements that should be met in order to heat the home satisfactorily are discussed and advice is given concerning the selection, installation and operation of the plans.

Contents.—Requirements for satisfactory heating. The chimney flue. Selection and installation of heating equipment. Understanding the heater and operating it intelligently. Weather-tight houses essential. Humidity. Ventilation requirements.

Physical Testing of Non-Bituminous Road Materials. (11)—(*Agricultural and Mechanical College of Texas. Bulletin No.* 17 *by Roy M. Green. Pages* 27. *Size* 6″ x 9″. *Illustrated.*) Modern methods of testing materials for highway construction have been developed during the past forty-five years. Prior to that time reliance was placed, either upon service tests, or upon the appearance of the material and the opinion of its suitability from merely a superficial inspection. Through a study of the physical properties of materials that have been used successfully in road construction there has been worked out a system of tests which gives an indication of the properties desired in only a few hours. These tests approximate conditions on the road, but the element of time is eliminated.

Contents.—Tests made upon rock for water bound macadam construction, for bituminous roads and pavements, for concrete pavements and structures. Tests made upon gravel for gravel roads, and for concrete structures. Tests made upon sand for sand clay roads and for concrete construction. Tests made upon clay for sand clay roads. Tests made upon paving brick and paving block. Tests made upon stone for stone block pavement.

Poultry House Equipment. (351)—(*New Jersey Agricultural Experiment Station. Vol.* 10. *No.* 1. *Pages* 4. *Size* 6″ x 9″. *Illustrated.*)

Synopsis.—Light and ventilation, Floors and litter, Roost and dropping boards, Feed bin and mash hoppers, Grit and shell hopper, Water device, Electric light equipment, Nests and brooding coops.

"LONG-BELL trade-marked lumber is milled at the mill," said a carpenter.

That was his way of saying:—

Long-Bell lumber comes to the job surfaced four sides.

It has had unusual care in trimming.

It comes full length—uniform in width and thickness in all surfaced stock.

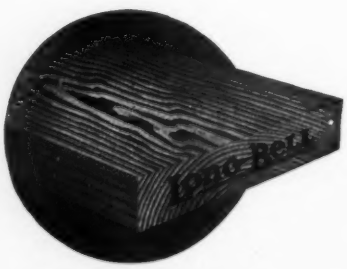
It is as nearly straight and true as good milling can make it.

The tongued and grooved stock fits snugly.

To the carpenter these things mean he can do a *better* job in *quicker* time because—

He can fabricate Long-Bell lumber with a minimum of planing, sawing and sorting.

To those for whom he is working, these things mean they will get a *better building for less money*.



Long-Bell lumber may be identified by the LONG-BELL trade-mark on the end of the board.

The Long-Bell Lumber Company
R. A. LONG BUILDING Lumbermen since 1875 KANSAS CITY, MO.

OIL PRINT BY
Roger Millen